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DESCRIPTIONS

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OF THE

TOWNSHIPS OF THE NORTH-WEST TERRITORIES

DOMINION OF CANADA.

L V. 35

WEST OF THE FOURTH AND FIFTH INITIAL MERIDIANS.

PUBLISHED UNDER THE AUTHORITY

OF THE

Hon. THOMAS WHITE,
MINISTER OF THE INTERIOR.

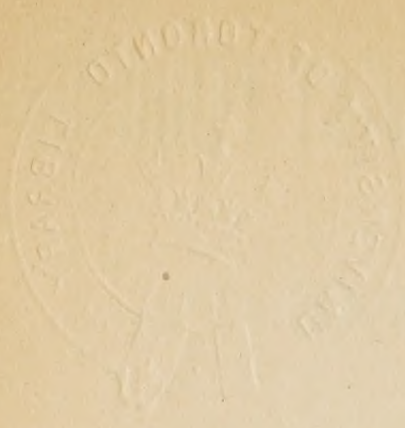
COMPILED AND ARRANGED FROM THE FIELD NOTES,
PLANS AND REPORTS OF THE SURVEYORS.

OTTAWA:

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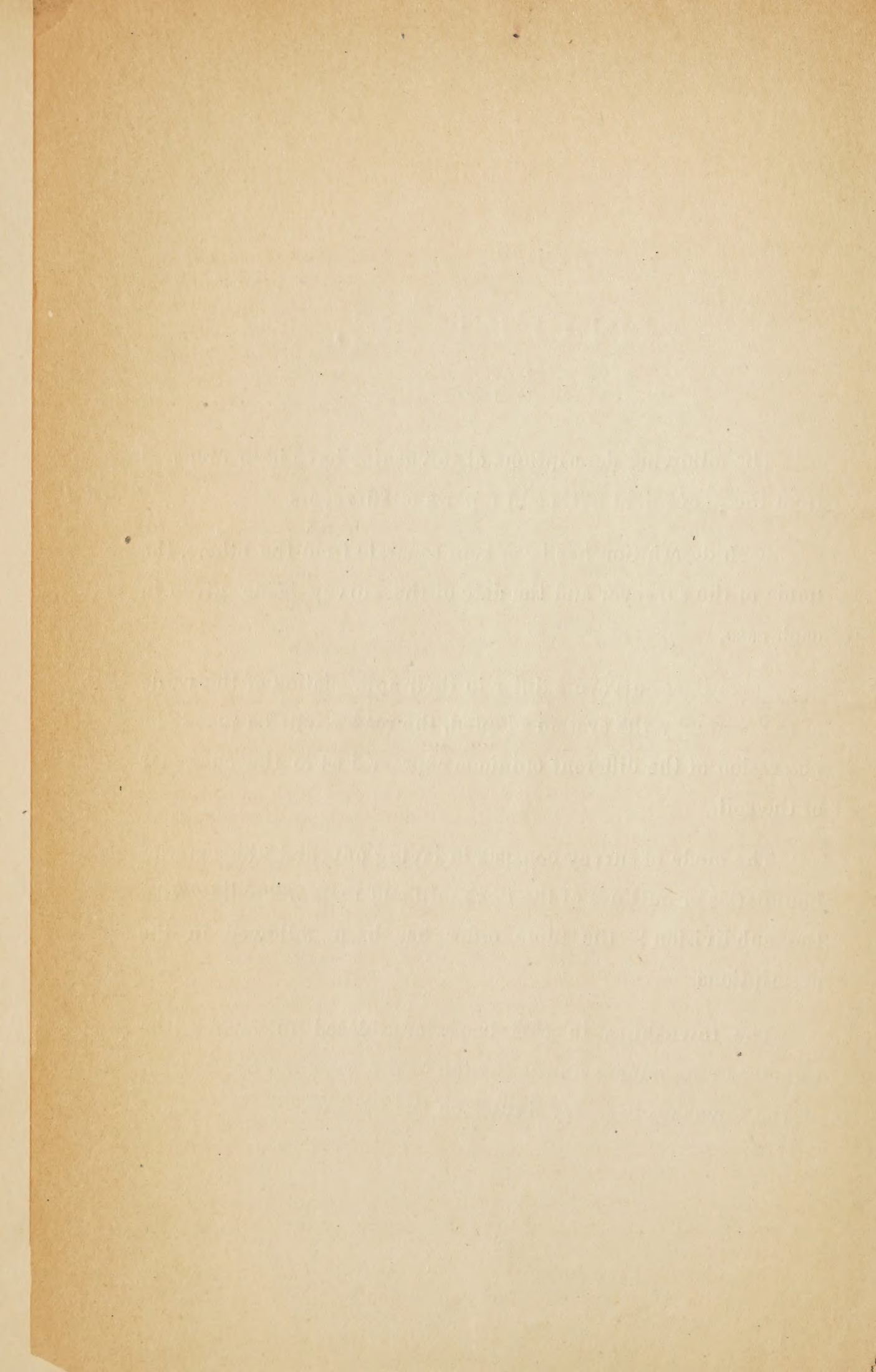
The following descriptions of townships have been prepared from the plans, field notes and reports of surveyors.

Each description has been kept separate from the others, the name of the surveyor and the date of the survey being given in each case.

Sometimes surveyors differ in their appreciation of the value of the land : by the system adopted, the reader will be placed in possession of the different opinions expressed as to the character of the soil.

The mode of survey consists in laying out first the exterior boundaries or outlines of the township and then proceeding with the subdivision ; the same order has been followed in the descriptions.

The townships, in this book, are placed in ranges, the number of the range being at the top of the page and the number of the township in heavy figures on the left side.



TOWNSHIPS WEST OF THE FOURTH INITIAL MERIDIAN.

RANGE I.

5. *Outlines*.—West, broken and hilly country, with a few coulées and some surface boulders. A running stream crosses the line in the southern part of Section 31. The grass is good in the valleys. The soil is sandy, with gravelly hill tops.—*C. E. Wolff*, 1883.

East, the line passes through a somewhat broken country along the southern foot slopes of the Cypress Hills. Medicine Creek is crossed in the southern half of Section 24. There is no wood. Soil, very gravelly.—*W. Ogilvie*, 1881.

South, rolling prairie. Soil, dry and stony. The line crosses a small lake on Sections 2 and 3, and a short distance further west the trail to Cypress Hills.—*O. J. Klotz*, 1883.

6. *Outlines*.—West, undulating country, considerably broken by coulées. Soil, sandy loam, mixed with gravel.—*C. E. Wolff*, 1883.

The east line passes through very broken country, along the southern slope of the Cypress Hills. There is a lake about half a mile west of the line on Sections 13 and 24. No wood. Soil, clay loam, full of coarse gravel.—*W. Ogilvie*, 1883.

7. *Outlines*.—North, rolling prairie; stony surface. Several small creeks, with a northerly course, and some growth of wood, in Sections 35 and 36, but not elsewhere.—*A. Bourgeault*, 1884.

West, the land is very rolling, and traversed in different directions by coulées. The soil is good, and on the Cypress Hills, the summit of which occupies the north-west, it is an excellent rich black mould. The township is remarkably well watered by numerous running creeks.—*J. G. Sing*, 1883.

Along the east boundary, very broken and hilly country, with some thick woods of poplar, spruce and willow, generally small, on the three northern sections. The soil consists of clay loam, in places full of coarse gravel. There are several running creeks, which cross the line, flowing south and east.—*W. Ogilvie*, 1881.

Sub-division.—The southern portion, from the Cypress Hills to the south boundary, is undulating prairie, with a very stony surface. Numerous small creeks flow from the hills, the southern face of which slope very gradually. The prairie on the summit of the mountain is gently-undulating, with a rich black loam soil. There is no wood, except some burnt pine and spruce in a deep gully on Sections 25 and 26, good only for firewood. This gully is about 300 feet deep. The Fort McLeod trail crosses the township.—*J. F. Snow* 1884.

8. *Outlines*.—The north is heavy rolling, with numerous ravines, a few ponds and some small creeks, the course of which is usually northwards.—*O. J. Klotz*, 1883.

The surface of the country is very rolling, and traversed in many directions by coulées. The soil is good, and on the Cypress

Hills it is a rich black mould. The township is almost all timbered with tamarac, spruce, poplar and pine. Creeks of good water abound.—*J. G. Sing*, 1883.

Going north, on the east line, the country is very rough and has many ravines. Water is scarce, and there is a fair growth of wood. After passing Section 24 these features give place to an open, heavily-rolling country, with a fair amount of surface water.—*W. Ogilvie*, 1881.

Sub-division.—Level, rolling and broken prairie, well watered by ponds and small creeks in the north, and by larger creeks in the south. On the southern and central portions there is considerable timber of various kinds, and also scrub and brûlé, occurring principally along the slopes of the ravines and the valleys of the numerous streams. The soil is, for the most part, gravelly and sandy, with yellow sand subsoil, and may be rated classes 2 and 3. The supply of grass being good, the township is well adapted to cattle raising.—*A. Bourgeault*, 1 4.

9. *Outlines*.—West, rolling and broken prairie, with soil principally gravelly clay. Class 3. The township is fairly well watered by sloughs and creeks.—*J. G. Sing*, 1883.

Eastwards, the surface is much broken by ravines from the Cypress Hills, the foot slopes of which begin in Section 13. The soil is a good clay loam, which would make excellent farms, and the grass is very good. Southwards, the surface is rolling to hilly prairie, well watered by creeks and marshes. The soil is good, but boulders are numerous in places.—*W. Ogilvie*, 1881.

Sub-division.—Rolling and broken. Soil, grey clay, and sandy and stony. Class 2. Willow bluffs are found along the creeks in Sections 36, 25, 26 and 23. The size of these willows are 4 to 6 inches. The creeks have generally fresh water in them. Northwards, there are very good settlement lands; southwards, the land is more suitable for grazing.—*J. E. Sirois*, 1883.

10. *Outlines*.—West, rolling prairie, with some stone. Soil, chiefly gravelly clay. Class 3.—*J. G. Sing*, 1883.

Eastwards, the surface is broken by a few ravines. There prevails a generally upward slope to Cypress Hills. The soil is a fair, sandy loam, with good grass.—*W. Ogilvie*, 1881.

Sub-division.—Rolling and broken prairie. Soil, some sand, grey clay, gravel and stones. Classes 2, 3 and 4. A few bluffs of poplar are met with along the creeks, and also in Sections 27, 28, 29, 19 and 30. The east and north parts are broken by gullies, traversed by creeks. The creeks of this township are very numerous.—*J. E. Sirois*, 1883.

11. *Outlines*.—For the first mile and a-half, going southwards, on the west boundary, the surface consists of an alkaline flat, and the rest rolling prairie, broken, at intervals, by deep coulées, some of which are stony. On the central and southern sections—more particularly the latter—the soil is of very good quality, consisting of clay loam. Classes 1 and 2. In the north it is chiefly class 3. No water or wood along the line.—*J. G. Sing*, 1883.

Eastwards, the surface is much broken by ravines. There are some patches of fair grass and soil, but very little water.—*W. Ogilvie*, 1881.

Sub-division.—Rolling and level prairie. Soil, clay loam, sand and gravel. Classes 2 and 3. The south part is much broken by high banks, ravines and dry creeks, in the vicinity of which are found growing some willow bluffs of 5 to 6-inch wood. The C. P. R. crosses the north part, and here is located Walsh station. Sections 24 and 10 have improvements and ploughing on them. Water is scarce, except in Section 34, in Mackay Creek.—*J. E. Sirois*, 1883.

- 12.** *Outlines*.—Along the northern boundary, in Section 35, there is a large alkaline lake, which is separated from a smaller lake further west by a narrow neck of land. The water of these lakes, though alkaline, is yet fit for use. In the remaining northern sections the country is rolling prairie, with a sandy loam soil.—*C. A. Magrath*, 1882.

The surface is broken and hilly in the north, and rolling in the south. The northern half of Section 30 is an alkaline flat, and in the north part of Section 31 is a marsh, 400 yards wide, on the line. Soil, clay. Classes 2, 3 and, in a few places, 4.—*J. G. Sing*, 1883.

Along the east there are clay flats of sedimentary deposit. There are also some gravel knolls, which rise fully 200 feet above these flats. Section 12 is somewhat marshy, from a sluggish creek passing through it in an easterly direction.—*W. Ogilvie*, 1881.

Sub-division.—Westwards, it is mostly hilly and gravelly. Classes 3 and 4. Eastwards, it is rolling prairie, grey clay, and stony. Classes 1, 3 and 4. A large lake breaks upon Sections 34, 35 and 36. There are a few creeks, but they are generally dry late in the season. No wood.—*J. E. Sirois*, 1883.

- 13.** *Outlines*.—Is rolling prairie, somewhat hilly in the south, and almost all covered, on the north, by Island Lake, which supplies plenty of good water, though slightly alkaline. This lake is about seven miles long, and five miles wide at the greatest width. It is shallow, and contains numerous islands, covered with abundant green vegetation. Another small lake lies in the southern part, which is also alkaline, but may be used. The soil is generally sandy. Along the west it is rolling prairie, with alluvial soil, 4 inches deep, over sandy subsoil. Class 2 in the south and 3 in the north. There are several alkaline ponds in the vicinity of this line. No timber.—*P. R. A. Belanger*, 1882.

Island Lake occupies a portion of this township. The southern part is composed of clay flats of sedimentary deposit, being washed down from the surrounding heights and deposited in the flats around the lake. These flats would, if properly cultivated, make fair farms. They have a tendency, however, to bake and crack into hard lumps.—*W. Ogilvie*, 1881.

The southern sections are rolling prairie, with a sandy loam soil and several alkaline lakes.—*C. Magrath*, 1882.

Sub-division.—One-third part of this township is occupied by Island Lake. South of the lake the country is level and rolling, becoming more hilly towards the south boundary, along which there are two alkaline lakes. The soil, generally, is a sandy loam. Class 2. There are some rich hay marshes in the centre of the township and towards the lake shore. The Medicine Hat and Red Deer trail crosses east and west.—*C. E. Towle*, 1883.

- 14. Outlines.**—The north is undulating prairie, stony and gravelly, broken by a few ravines, in one of which, a little east of the middle of Section 35, is a creek, and in another, on Section 33, is a small lake. The soil is sandy loam, 4 inches deep, with sandy subsoil. Classes 2 and 3. The south part of this township is occupied by part of Island Lake, and its soil resembles that of Township 13. It is, however, a little better in the north half, the grass, generally, being good. A chain of hills crosses the centre from east to west, and deep ravines run from north to south. In the latter, hay marshes are met with. Along the western side the surface is principally rolling prairie, sandy, gravelly and stony, with a few sandhills. Section 19 is broken by deep ravines. On Section 31 the line passes along the eastern side of a large hay marsh. Alluvial soil, 4 inches deep, with sandy subsoil. Classes 2 and 3 on the northern and southern, and class 3 on the middle sections. No wood in the township.—*P. R. A. Belanger*, 1882.

The surface of the north-easterly part of the township is rough and stony. The soil, generally, gravelly loam ; grass good. In Section 12 the east line strikes Island Lake, which is a little over four and a-half miles wide, where the line crosses it. Its waters are slightly alkaline, and appear to be shallow. It is difficult to judge of the limits of the lake, owing to the number of islands and the depth of the water according to the season. Wild birds are innumerable —*W. Ogilvie*, 1881.

Sub-division.—Nearly all the southern half is occupied by Island Lake. The northern half is rolling, broken in some places by hills and ravines, in some of which are living springs of water. The soil is a sandy loam, class 2, and is fair agricultural land. The water of Island Lake is slightly alkaline.—*C. E. Towle*, 1883.

- 15. Outlines.**—Most of the surface along the north boundary is gently-undulating. Soil, 5 inches deep, with sandy subsoil. Rated classes one and 2 in the west, class 2 on the middle sections, and 1, 2 and 3 in the east. Going south, on the west boundary, these same features predominate, until, in the south, it becomes alternating undulating and broken country, deep ravines occurring at intervals, particularly in the western sections, where it is also somewhat stony and gravelly. Alluvial soil, 4 inches deep, with sandy subsoil. Classes 2 and 3. No wood in the township. Generally the soil is sandy, but good, with abundance of grass, and is well suited for agricultural purposes. Pools of water, ponds and marshes are occasionally met with.—*P. R. A. Belanger*, 1882.

Along the east boundary the surface is hilly, with boulders on the hills. Soil, sandy loam. Classes 2 to 3. There is neither wood nor water along this line.—*W. Ogilvie*, 1881.

Sub-division.—Northwards it is level and rolling; southwards it is quite hilly. The soil is generally a sandy loam, class 2, but is in places mixed with gravel and boulders. In the valleys are several lakes, marshes and sloughs, some of which are alkaline; the rest are comparatively fresh.—*C. E. Towle*, 1883.

- 16. Outlines**.—The surface along the north boundary is rolling prairie, except on Section 34 and the western half of 35, where it is quite hilly. On the former section, a few chains off the line, is a lake of good water. The soil is clay loam, averaging from 6 to 18 inches in depth, with clay subsoil. Class 2 —*O. J. Klotz*, 1882.

The west is nearly all rolling prairie. Most of the surface along the south is gently-undulating. Sections 4 and 1 are nearly level, and Section 2 rolling. Alluvial soil, 5 inches deep, with sandy subsoil; rated classes 1 and 2 in the south-west, and 1, 2 and 3 in the south-east. Generally, throughout the soil is sandy, but good, with abundance of grass, and is well suited for agricultural purposes. Pools of water, ponds and marshes, are occasionally met with. Boulders are scattered about —*P. R. A. Belanger*, 1882.

Eastwards, hilly and rolling prairie; granite boulders on hills. Between Sections 13 and 24 is a reedy lake. Soil, a fine sandy loam with good vegetation.—*W. Ogilvie*, 1881.

Sub-division.—The southern part of this township is level or rolling prairie, well supplied with lakes and sloughs of fresh and slightly alkaline water. The northern part is more hilly, and the water strongly alkaline. The soil is generally a sandy loam, mixed with gravel and boulders upon the higher lands and ridges. —*C. E. Towle*, 1883.

- 17. Outlines**.—Surveyed the north and west boundaries of this township, and find them undulating prairie, with light, sandy loam soil, from 9 to 12 inches in depth, on a sandy subsoil. Class 1. Some parts on the west boundary are high-rolling. The township is, however, on the whole, poor for farming purposes. The grass is very short and poor. There is no wood and very little water, all the sloughs (and they are few and far between) being dry. Their appearance indicates very little water, even in the rainy season. A pond of permanent water was found in the south-west corner. It was about half a mile broad, east and west, and three-fourths of a mile long.—*H. C. Denny*, 1882.

1st Report.—The country along the east boundary is all rolling prairie, of a sandy loam soil. No wood, and water scarce.—*W. Ogilvie*, 1881.

2nd Report.—East, level prairie. Soil, light, sandy loam, varying in depth all the way from 6 to 12 inches, with sandy subsoil, and rated first class. No water or timber.—*H. C. Denny*, 1882.

The surface, southwards, is rolling prairie, except on Section 3 and the western half of 2, where it is quite hilly. The soil is clay

loam averaging from 6 to 18 inches in depth, with clay subsoil. Class 2.—*O. J. Klotz*, 1882.

Sub-division.—The surface in the northern and eastern part of this township is generally undulating prairie. Numerous fresh-water marshes were crossed, the largest being in Section 23. In the southern and western portions the surface is rolling and hilly. The soil a clay loam, with a clay subsoil, and rates class 2. This township is well adapted for agricultural purposes and stock raising. In the south-west corner there is an alkaline lake, but the rest of the water met with is good.—*J. McLatchie*, 1883.

- 18. Outlines.**—Westwards and southwards the surface is undulating prairie. Soil, light sandy loam, 8 to 18 inches, class 1, with sandy subsoil. No timber or water. To the north is hilly country, the hills being from 30 to 150 feet in height, with stones and boulders on their summits. The soil is a light sandy loam. The grass is short and poor. There is no wood, and very little water, all the sloughs (and they are few and far between) being dry. Their appearance indicates very little water, even in the rainy season.—*H. C. Denny*, 1882.

1st Report. Eastwards, surface rolling; sometimes knolly and stony. Soil, gravelly and light. Poor grass, and very little water.—*W. Ogilvie*, 1881.

2nd Report.—East, level prairie. Soil, light sandy loam, depth 10 inches, with sandy subsoil. Rated second class in Sections 36 and 25. On Sections 24 to 1, inclusive, the soil is of the same general description, and varies in depth from 6 to 10 inches, but is rated first class. No timber or water.—*H. C. Denny*, 1882.

Sub-division.—This township is very well adapted for agricultural purposes. It is generally undulating prairie, with the exception of the northern portion, which is traversed by a range of high gravelly hills. A succession of ponds and marshes were found extending across the entire township, furnishing excellent pasturage. The southern portion is much drier than the northern, and water of any kind is scarce. Soil, clay loam on clay subsoil, and may be classed 1 and 2.—*J. McLatchie*, 1883.

- 19. Outlines.**—The South Saskatchewan River flows north-easterly across the north-west corner of the township. A creek, also flowing eastwardly, turns northward here and enters the river. The surface of Section 31 is very much broken by the banks of the two streams, and the southern half is very stony. Sections 30 and 19 consist of rolling prairie, with a few sandhills on the former. From thence, southwards, the surface is covered with hills of drifting sand. The soil is class 4, with 2nd class in the north of Section 30, and one or two spots where it is class 3. No timber.—*J. G. Sing*, 1883.

Eastwards, the surface is rolling, with occasionally juniper and ground scrub; sometimes knolly and stony. Soil, gravelly and light; poor grass and very little water. Classes 2 to 3. Westwards, it is rolling prairie, with sandhills in the centre. The soil is a light sandy loam and drifting sands.—*W. Ogilvie*, 1881.

Sub-division.—The southern outline of this township runs along the summit of a range of gravelly and stony hills, which also covers the southern portion of the township. The surface of the northern and eastern sections is an undulating prairie. Soil, sand and clay loam on clay subsoil, class 2, and fairly adapted for agricultural purposes, with good water in the marshes. About a mile north of the correction line a deep alkaline valley crosses from east to west. The balance of the township is covered with drifting sandhills, which are partially covered with cherry and scrub. At the extreme north the surface is rolling and undulating prairie, broken, at intervals, by hills or stony ridges and ravines, especially Section 31. Soil, gravelly clay, or clay loam, 6 to 18 inches deep, with clay subsoil, rated principally class 2.—*J. McLatchie, 1883.*

- 20. Outlines.**—In the northern part the soil is poor and sandy, ranking 3rd class. The Saskatchewan River crosses the north boundary in Section 34, and has, at this point, very high banks, fully 500 feet. The timber is only in isolated patches, and seems to cease altogether a few miles south of the line. It consists of cottonwood and poplar, principally the former.—*T. Drummond, 1883.*

Westwards, rolling prairie, with sandhills. The soil is light sand loam, and drifting sands. The South Saskatchewan River courses in a north-easterly direction, breaking the surface very much. The banks are very steep and precipitous, deep coulées extending from the river for miles. Seams of coal were seen along the river.—*J. G. Sing, 1883.*

The north-eastern part is rolling, and the soil very poor. In the south-eastern part the soil is somewhat better, but still poor. Grass very poor, and very little water. Class 4 in the north and 3 in the south. Section 36 is covered with juniper or ground cedar.—*W. Ogilvie, 1881.*

Sub-division.—The South Saskatchewan River enters this township on Section 6 and leaves it at the north-east corner of 34. Its average width is 15 chains. The banks are from 300 to 400 feet high, and are so broken with ravines, from half a mile to a mile on each side of the river, as to render that portion of the township worthless for farming. The balance of the land is undulating prairie. The soil north of the river is sandy loam, and south of it clay and sandy loam. In both cases it averages from 6 to 18 inches in depth, has a clay subsoil, and is generally rated class 2. The creeks running into the river are usually somewhat alkaline. A number of small marshes are found throughout the township, but they do not furnish a supply of water during the summer months.—*J. McLatchie, 1883.*

- 21. Outlines.**—Going west, on the north boundary, Sections 35 and 36 are much broken up by the South Saskatchewan River, which flows north-easterly across the line. West of this the soil is a light sandy loam, 6 to 18 inches in depth, on a sandy subsoil, with an occasional admixture of clay. Class 1 on the two western sections; class 2 on the rest, excepting Section 26 and the eastern

half of 35, where it is classes 4 and 3 respectively. No wood. The west is rolling prairie, with light sandy loam soil, 6 to 18 inches in depth, on a sandy or, towards the north, sand and clay subsoil. The south-easterly half of the township is more or less broken by the banks of the South Saskatchewan River, which are, in many places, precipitous, and consist of layers of sand, clay, friable and other sandstone and clay slate, some of the last two well adapted for building purposes. Deep coulées and ravines run into the river valley. Within several miles of the river the land is covered in places by great depths of blown sand, with often a clay subsoil.—*C. F. Miles*, 1882.

East, the surface is principally rolling prairie, with sandy soil. Class 4. In Sections 1 and 12 it consists of sandy knolls, covered with juniper, and Section 36 is very hilly, broken and rough. Through the north-east corner of the latter section the South Saskatchewan River flows north-easterly. There is no other water along the line, and no wood.—*W. Ogilvie*, 1881.

The Saskatchewan River crosses the south boundary in Section 3, and has, at this point, banks fully 500 feet high. There is no timber here, although there is some in the township south of this. Beyond the river the surface is principally level, or rising gradually toward the west. Section 1 has some sandhills on the eastern half. The soil is chiefly sandy loam, 6 to 9 inches in depth, with clay or sandy subsoil. Classes 2, 3 and 4.—*T. Drummond*, 1882.

Sub-division —Very rolling and undulating. There is a large valley in the south-east. The Saskatchewan River enters in Section 3, and continues to 21, where it turns and runs to the north-east corner of the township, with a current of about three and a-half miles an hour. Its banks are much broken by ravines and coulées, and average 100 to 120 feet high—some places measure 250 feet high. The soil will average class 2, and consists of clay, clay loam, sand and sandy loam and gravel, according to the locality.—*C. G. Sheppard*, 1883.

- 22. Outlines.**—The western and middle sections of the northern tier are very much broken by deep ravines and high ridges. Alluvial soil, generally 6 to 18 inches in depth, with clay subsoil; class 1 on the two eastern sections, and on the rest, principally class 3. Travelling south, on the west boundary, the country is rolling prairie, with light sandy loam soil, 6 to 18 inches deep, on a sandy subsoil. Continuing eastwards, along the south boundary, the surface is all rolling prairie, except on Section 1, which the South Saskatchewan River breaks up. The soil is a light sandy loam, 6 to 18 inches deep, on sandy subsoil, with an occasional admixture of clay. Class 1 on the two western sections, and class 2 on the rest, excepting Section 1. No wood, and very little water anywhere. Probably 50 per cent. of the land in the township is fit for cultivation.—*C. F. Miles*, 1882.

The eastern boundary is crossed by the Saskatchewan River, which is about 13 chains wide and 4 feet deep. The valley is about 350 feet deep, and has precipitous banks of soft, friable sandstone, one seam being suitable for building purposes. Small seams

of coal appear, but are of no value. There is no wood.—*W. Ogilvie*, 1881.

Sub-division.—Undulating and rolling prairie. Soil, sandy loam. Class 2. The western and northern sections of this township are good for settlement. The South Saskatchewan River leaves the township on Section 1, returns on Section 13, and, after making a semi-circle in the township, leaves it on Section 25. For description of river, see Township 21. No marshes or wood.—*C. G. Sheppard*, 1883.

- 23.** *Outlines.*—Rolling prairie, with a few sloughs (dry in August), and broken by coulées, near the Red Deer, two of them extending all the way across the township. Soil, heavy clay, except in the river valley, where it is either strong clay or sandy loam. Water is scarce, what there is being strongly alkaline. The Red Deer River runs across the south half of the township. The river is rapid, with an average width of 25 chains, but in some places over half a mile. The main channel is from 5 to 7 feet deep. Numerous sand bars divide the stream into several shallow channels. There is some timber along the river.—*A. W. McVittie*, 1882.

South of the Red Deer, to the west, the soil is a stiff clay, alternating with light sand, and rated class 2. The western and middle south sections are, however, very much broken by deep ravines and high ridges. Soil, 6 to 18 inches in depth, with clay subsoil. Class 1 on the two eastern sections, and class 3 on the central sections. No wood.—*C. F. Miles*, 1883.

Going south, on the east boundary, Section 36 consists of stony ridges in the north, and a gradual ascent, covered with wood, in the south. The next mile is rolling prairie sloping gently towards the valley of the Red Deer, which occupies the greater part of Section 24, and into which the line passes through one of the many deep ravines leading therefrom. The valley is from 300 to 350 feet deep. The depth of the water averages about $2\frac{1}{2}$ feet. The banks are covered with poplar, willow, small birch and cherry, fit for fuel only, with few exceptions. The rest of the country along this line is rolling prairie. The soil is mostly clay in the north, and sandy in the south. Classes 4 and 3, the former predominating.—*W. Ogilvie*, 1881.

Sub-division.—Gently-rolling and undulating prairie. Soil, generally a sandy loam on a sandy subsoil. Class 2. Red Deer River crosses the township from Sections 7 to 24, with a current of about 3 miles per hour, and about 6 feet of water in main channel. Some large cottonwood trees, 10 to 15 inches in diameter, are growing along the banks, as also a thick underbrush and scrub. The vicinity of the river is stony, gravelly and sandy, and the north is much broken by ravines.—*C. G. Sheppard*, 1883.

- 24.** *Outlines.*—In the northern part the ridges are gravelly, sometimes with granite boulders; the flats, generally fair, loamy clay; good grass everywhere; a few small meadows; very little water; subsoil generally hardened clay. In the east there are some deep and rough ravines, which are very stony. Soil, light and

gravelly, with good grass. Some scrub and small poplar in the ravines. Section 1 is very broken, and the land is here rated class 4.—*W. Ogilvie*, 1881.

West and south it is generally a rolling prairie, with a few sloughs (dry in August), and broken by coulées, two of which extend across the township from north to south. The soil is a heavy clay. Water is scarce, what there is being strongly alkaline.—*A. W. McVittie*, 1882.

Sub-division.—Undulating and rolling, except in the north-east which is much broken by ravines. Soil, generally a light clay, well covered with grass, and well drained. This township is well adapted for agriculture and pasturage. No wood.—*C. G. Sheppard*, 1883.

- 25. Outlines**.—West, surface, rolling on the south and undulating in north. No wood and little water, there being only small creeks in Sections 20 and 31. Soil, principally clay loam, averaging about 14 inches in depth, with a clay subsoil. Classes 3 and 2 in the south, and class 1 in the north.—*C. F. Miles*, 1883.

Sub-division.—Hilly and broken in the north, and generally good grazing land. Rolling prairie in the south; fair land, of clay loam. Classes 1 and 2, with good surface water in marshes and ponds, but no wood. A cart trail crosses the township.—*J. Dudderidge*, 1883.

Along the southern and eastern boundaries the surface is rolling and the ridges gravelly. The soil, generally, is light and gravelly, with good grass everywhere. The flats, generally, have a fair loamy clay, and there are a few small meadows, but water is usually scarce.—*W. Ogilvie*, 1881 and 1882.

- 26. Outlines**.—West, rolling prairie, with clay loam soil, 8 to 18 inches deep, on clay subsoil. Class 1 on Section 1, and class 2 on all the rest. Water scarce. No wood.—*C. F. Miles*, 1883.

Along the east boundary the surface is rolling. Soil, generally, very light and gravelly, with good grass on it. There are some flats of clay loam, but they are very stony. Meadows or ponds are scarce.—*W. Ogilvie*, 1881.

Sub-division.—Hilly and broken, except in the north-eastern portion, which is rolling prairie. Soil, generally, sandy loam, class 2, but in some places clay, clay loam, sand, and sand and gravel. This is an excellent grazing township, with good fresh surface water, but no wood.—*J. Dudderidge*, 1883.

- 27. Outlines**.—West, rolling and hilly prairie. The soil on the two southern sections is clay loam, 12 to 18 inches deep, over clay. From thence to the middle of Section 30 it is either clay loam, over alkaline clay, or sandy loam over sand, the proportion being as 5 to 3 in favor of the former, and the average depth of alluvial soil about 14 inches. The rest is gravel loam, 10 inches, over sand. It is rated class 2 everywhere, excepting Section 28 and the northern half of 30, where it is class 3. No wood. The north-east part is more flat, containing numerous alkaline depressions. An old stream bed, with ponds of standing water, running easterly, touches the north limit of the township.—*C. F. Miles*, 1883.

East, principally rolling prairie, with sandy soil, a good deal composed of pure sand, sometimes in drifted heaps, with scrub on it. Grass generally poor. Class 4. In the north of Section 25 is a reedy lake, along the south shore of which is a stretch of marsh. There is another large stretch of water on Section 12, and one or two small ponds on 36. No wood.—*W. Ogilvie*, 1881.

Along the southern boundary the three western sections consist of hilly and broken country, with clay loam soil, 18 inches deep, on a subsoil of similar character. Class 2. Along the remainder of the line the surface is open, rolling prairie, and the soil principally sandy loam, 3 to 4 inches deep, over clay. Class 3. No wood nor water.—*J. Dudderidge*, 1883.

- 28. Outlines.**—The northern part is rolling and undulating. Some marshes and alkaline lakes occur in the east. The soil is a rich clay loam. Class 1. Good land. Towards the west centre several small lakes and some marshy lands are to be seen.—*T. Fawcett*, 1883.

West, undulating prairie on the two northern sections, and rolling prairie on the rest, becoming somewhat hilly on Section 6. Soil, principally clay loam, 10 to 18 inches, over clay. Rated class 1, except on Section 6, where it is classes 2 and 3. No wood, and little water.—*C. F. Miles*, 1883.

East, the surface is rolling and knolly. Soil, generally gravelly loam. Thin grass, and few meadows or ponds.—*W. Ogilvie*, 1881.

- 29. Outlines.**—East, the surface is rolling. Soil, generally light; in some flats comparatively good. Many good meadows.—*W. Ogilvie*, 1881.

South, the soil is a rich clay loam, some 18 inches in depth. The surface gently-undulating, and the country nicely watered by ponds and sloughs, mostly fresh.—*T. Fawcett*, 1883.

Is, in general, rolling, with the central and northern portions inclined to hilliness, where it is stony in places. Water is good and abundant throughout. There is no timber of any kind. The soil varies from a clay to a sand loam. Classes 1 to 3.—*F. W. Wilkins*, 1884.

- 30. Outlines.**—The central portion, from north-west to south-east, lies in a broad valley, in which there are a number of lakes. Land in this valley is rolling. The rest of this township is very hilly, stony and broken generally. Water of both good and bad quality is abundant everywhere. No timber. Soil, very good in some parts, in others very light and sandy, classes from 1 to 4.—*F. W. Wilkins*, 1884.

Along the east boundary the surface is rolling. Soil, generally light—in some flats comparatively good, with many good meadows.—*W. Ogilvie*, 1881.

- 31. Outlines.**—Is, in general, heavily rolling to hilly in character. About the central part there are a few sand knolls. Good water is fairly abundant. No timber, other than cherry bushes and thorns. The soil over the greater portion is very light and sandy. Classes from 1 to 4.—*F. W. Wilkins*, 1884.

East, rolling prairie. Soil, generally light and poor. Class 3. There is a reedy lake in the north of Section 25, and two or three meadows on Section 1. The grass, as a rule, is poor. There is no wood.—*W. Ogilvie, 1881.*

32. *Outlines.*—North, the surface is rolling prairie, except on Section 35, where it is undulating. On 36 is quite a large lake of clear water. Water is comparatively plentiful all along the line, marshes and ponds occurring at intervals. No wood. Soil, principally sandy loam, of an average depth of about 6 inches. Class 3. It improves a little towards the west, being rated classes 2 and 3 on Sections 31 and 32 where it consists chiefly of clay loam, over clay.—*E. Bray, 1883*

This township is, in general, of a heavy rolling character. There is both good and bad water in abundance. There is no timber or wood of any kind. The soil throughout is somewhat variable, but at the north it is very light. It ranges in all classes from 1 down to 4.—*F. W. Wilkins, 1884.*

East, chiefly rolling prairie, with light and sandy soil. Class 3. In the south of Section 36 is an alkaline lake. Section 24 consists of sandy knolls, alkaline flats and ponds, and in the south some scrub. Along the southern portion of the line are some fine meadows, in some of which there is good water. No wood.—*W. Ogilvie, 1881.*

33. *Outlines.*—Is, in general, of a rolling character, with the central and north-western portions somewhat hilly. Stones on the hills. Both good and bad water in abundance. No timber. Soil, variable, being excellent in some portions, and very light in others. Classes 1 to 4.—*F. W. Wilkins, 1884.*

East, surface exceedingly rough and, in places, very stony. Soil, poor; many ponds and meadows.—*W. Ogilvie, 1881.*

Along the southern boundary the surface is rolling prairie. Water is in fair supply in ponds and marshes. No wood. Soil, sandy loam, class 3, improving on Sections 5 and 6, where it is a clay loam, 10 inches deep, on clay.—*E. Bray, 1881.*

34. *Outlines.*—This township is a hilly one in general, though some nice tracts of rolling land are to be found in it. The tops of the hills are generally stony. Good water in abundance. No timber. The soil is good as an average. Sand loam, principally. Classed from 1 to 3.—*F. W. Wilkins, 1884.*

The eastern portion of this township is similar to No. 33.—*W. Ogilvie, 1881.*

35. *Outlines.*—This township is generally very hilly, rising on the north to a very high range of hills. Some nice, though small, tracts of rolling land are to be found in the southern part. Lakelets and ponds are numerous. The tops of the hills are generally very stony. Good water is everywhere in abundance. No timber of any kind. The soil is generally very good, being sometimes clay loam, and at others sand loam. Classed from 1 to 3.—*F. W. Wilkins, 1884.*

East, the north half is exceedingly rough, the surface being composed of sharp and, sometimes, very high knolls, in many

cases covered with boulders. The hollows are meadows or ponds. Section 13 is an extensive flat of poor soil and much alkaline water. The remainder of the township is poor soil, thin grass and rough surface, with many alkaline ponds.—*W. Ogilvie*, 1881.

- 36.** *Outlines*.—North, the eastern half of this line is hilly, with some low land on the adjoining portions of Sections 35 and 34, in which are a few ponds and swamps. Section 33 is rolling and broken, very stony and sandy. The two western sections consist of rolling country, with bluffs of small poplar. The soil on Section 36 is clay loam over clay; class 1. On all the rest it is principally sandy loam, 2 to 4 inches deep, over sand; class 2.—*T. Kains*, 1883.

Is rolling in the northern portion, which rises gradually to a very high range of hills in the south. Ponds of both good and bad water are numerous in the hilly portion. Stones are plentiful on the hills. Some nice clumps of poplar—fit for firewood and rails only—grow in the extreme north of the township. The soil in this portion is almost entirely pure sand, gradually getting better to the south. In the hilly portion the soil is generally a good sandy loam, and classes about 2 in the south to 4 in the north.—*F. W. Wilkins*, 1884.

Along the east boundary, in Section 36, there is an extensive ridge running easterly and westerly, which rises about 200 feet above the plains. The soil is generally light, but the grass is good; there are many small meadows. The north half of the township is rolling; in the south half is an extensive ridge of sharp knolls.—*W. Ogilvie*, 1881.

- 37.** *Outlines*.—Eye Hill Creek runs in a north-easterly direction from the south-west to the north-east corner. It has a general width of about 30 feet, is $2\frac{1}{2}$ feet deep, muddy bottom and good water. In some parts of its course it is bordered by wet, swampy land. The current is moderately rapid. The southern part of the township is of a sandy nature. A small quantity of poplar grows in the south-west corner. The northerly portion is open and rolling prairie land, with clay loam soil and some gravel. Good water was found in sloughs. The westerly sections are rolling, sandy land, with many ponds and sloughs, and good grazing in the hollows. The township is classed from 1 to 3.—*J. F. Garden*, 1884.

Going north, on the east side of the township, in the south-east there is a hilly portion, about 200 feet high, from which the surface gradually descends to the east centre, where there is a valley containing the western end of a chain of lakes. In the north-eastern corner of the township Eye Hill Creek crosses, flowing in a north-easterly direction. Except in the low-lying places, the soil is generally light and the grass short.—*W. Ogilvie*, 1881.

There are high hills in the south-east, which follow the boundary for a mile. These hills gradually bear south-west. Half of the range is rolling country, with clay loam and clay subsoil. The balance is composed of sand, with stones on the knolls. In Section 6 there is a considerable quantity of small poplar.—*T. Kains*, 1883.

- 38.** *Outlines*.—Is an open, rolling prairie. Numerous ponds and sloughs appear in the south-west and westerly portions, with

good grass about them. Stones are scattered on some of the ridges. The soil varies from a clay loam in the south to loam and sandy loam in the west and north, and is classed from 1 to 2. Eye Hill Creek—running north-east—crosses Section 1.—*J. F. Garden, 1884.*

Along the east boundary, Sections 36 and 25 are very sandy. The rest of the township is rolling prairie, with many very fair meadows, and good grass. Soil, fair, gravelly loam. Eye Hill Creek crosses the line in Section 1.—*W. Ogilvie, 1881.*

39. *Outlines.*—Has an open, rolling surface in the extreme north and south. The remaining portions are open, but broken by large valleys extending east and west, containing large ponds and good grazing lands, and in Section 12 by two low sand ridges, with a small growth of cherry bushes and scrub. The soil varies from clay loam to sand, and is classed from 1 to 4.—*J. F. Garden, 1884.*

Going south, along the east boundary, the first three sections are open prairie; surface undulating; some good meadows and fresh-water ponds. Soil, generally a gravelly loam, which would make pretty fair farming land, being open, light and warm, and supports a good growth of grass. In Sections 13 and 12 there is quite a large lake, with slightly alkaline water, and some small poplar on the south side of it. The south-east of the township is pure sand.—*W. Ogilvie, 1881.*

40. *Outlines.*—North, rolling and undulating country. The western half of Section 32 lies in an alkaline lake. Small lakes, ponds and marshes occur along the line, the latter being particularly numerous in the western part of 31. There is no wood anywhere along the line, but there is some about three miles north of it, opposite Section 35. Soil, black loam, 4 to 9 inches deep, with sandy loam subsoil. Class 1.—*C. A. Magrath, 1883.*

Is an open and rolling prairie, having numerous ponds and sloughs in the westerly part, with good grazing about them. In the south-west, frequent low ridges, from 15 to 20 feet in height, were noted, the soil being a good loam, classed from 1 to 2. In the southern portions the surface is undulating or rolling, with some large ponds and good grasses, the soil varying from loam to clay loam, and class 1.—*J. F. Garden, 1884.*

The east boundary lies over open prairie; surface undulating; some good meadows and fresh-water ponds. Soil, generally a gravelly loam, which would make pretty fair farming land, being open, light and warm, and supports a good growth of grass.—*W. Ogilvie, 1881.*

41. *Outlines.*—The greater—and southerly—portion is open and hilly, or rolling, with large valleys, containing, in some instances, large ponds. There are also many ponds, containing good water, in the northerly end, and the surface here is hilly and broken. A creek, about 2 feet deep, which crosses the line six times in Sections 30 and 31, flows out from a lake a little east of the latter point. Along its banks there is some poplar and willow, and also some poplar bush in a ravine in Section 19. Soil, principally clay loam, 10 or 12 inches deep, over clay, as far north as the middle of Section 30, from which point it is sand or sandy loam, over

sand. It is rated class 1 on the southern, class 2 on the central, and 2 to 3 on the northern sections.—*J. F. Garden*, 1883.

1st Report.—The soil in the south-eastern part is clay loam or loam, and classes 1 to 2. In the north-eastern portion the soil becomes sandy, and classes 2 to 4. Some poplar clumps may be found in the north-eastern part.—*W. Ogilvie*, 1881.

2nd Report.—On the eastern boundary, going north, the land becomes much broken, with a good soil, to the first large lake in Sections 13 and 24, where it becomes very sandy, and continues so. North of the lake an extensive clump of 6 to 8-inch poplar extends to another lake in Section 36, which is saline.—*W. A. Ashe*, 1882.

South, the surface is rolling. Small lakes, ponds and marshes are frequently met with. There is no wood along the line, but there is some about three miles north. Soil, black loam, 4 to 9 inches deep class 1.—*C. A. Magrath*, 1883.

42. *Outlines*.—The surface is generally hilly, broken and sandy, with numerous large ponds. There is a large lake at the north-east corner, containing very saline water. Another lake at the south-west corner contains water which is moderately good. There is plenty of wood, in the shape of small poplar, all along the line; also considerable scrub, some willows, and, in a few places, belts of small poplar timber, 8 to 12 inches in diameter. Soil: Sections 6, 7 and 31, principally sand. Class 3 in the two latter, and class 4 in the first. Sections 18 and 19, about 12 inches of loam, over clay. Class 2 in the latter, and 2 to 3 in the former. Section 30, chiefly sand, or sandy loam. Classes 2 to 3.—*J. F. Garden*, 1883.

East, rolling and hilly country, covered with scrub, brush-wood and, in the south, clumps of fair sized poplar.—*W. A. Ashe*, 1882.

43. *Outlines*.—The north-west part is much broken by hills and ridges, with poplar clumps, a large portion of it being dead. The north-east corner is lower, and gently-rolling land, with but little wood. An open sandy valley extends from Section 7, easterly, three or four miles. Along the southern boundary hilly, sandy land is found, with scattered poplar brush and numerous ponds, some of them being alkaline. A part of a large saline lake enters it in the south-east corner. The soil is either a sandy loam or sand, and classes from 2 to 4.—*J. F. Garden*, 1884.

North of a pond, in Section 12, an extensive clump of 6 to 8-inch poplars extends north along the east boundary. The land is well suited for settlement, containing several tracts of excellent soil.—*W. A. Ashe*, 1882.

44. *Outlines*.—North, the surface is principally undulating, except on Sections 31 and 35, which are somewhat broken. On the former is a creek about 3 feet deep, with rapid current and good water, and course north-easterly. The valley of the creek which is about 90 feet deep, contains some fair sized spruce. A little south of the line a smaller creek flows into the first. There is some heavy poplar in the west of Section 33, and small poplar, willow and scrub elsewhere. Small lakes and ponds also occur

at intervals. The soil is, for the most part, sandy loam, over sand, with now and then an interval of clay. Rated class 1 in the east and 2 in the west.—*T. Kains*, 1883.

The easterly portion is open prairie, with a large valley leading northerly into the valley of Battle River. The westerly parts contain many sand ridges, with a large quantity of poplar and brush. Many of the trees are 13 inches in diameter and 50 feet clear. Ribstone Creek crosses the extreme north-west corner, running in a narrow coulée 150 feet deep. Exposed layers of sandstone were noticed in the sides of the valley. Pasturage is very good among the poplars, and about the ponds, vetches and peavines are plentiful. The soil is sandy loam or sand. Classes 2 to 4.—*J. F. Garden*, 1884.

Along the south-east of the township poplars abound, till a lake is reached, between Sections 12 and 13. A trail crosses Section 25, and there are a few small marshes. The land is well suited for settlement, as it contains several tracts of excellent soil.—*W. A. Ashe*, 1882.

- 45. Outlines.**—Undulating prairie, interspersed with bluffs of small poplar, mixed with willows and dry wood. Battle River runs through the centre, from west to east. It is a stream about $1\frac{1}{2}$ chains broad by 3 feet deep, and where it is crossed by the west boundary has a sandy bottom, and fresh water. Its current runs at the rate of two miles an hour. It lies in a valley of about one and a-half miles wide and 100 feet deep. A belt of timber—a mixture of poplar, cottonwood, birch, cherry and thick willows—appears along its shores. A beautiful creek (Ribstone) runs from the south across Sections 6, 7, 8 and 17, to Battle River, in a ravine 100 feet deep. The soil is rated class 1, being a clay loam on a clay subsoil. There are numerous fresh-water ponds.—*P. R. A. Belanger*, 1884.

The Battle River is fairly wooded, and there are clumps of trees in the north of the township. The land is well suited for settlement, and water fresh.—*W. A. Ashe*, 1882.

South, the surface is principally undulating. On Section 6 there is a creek, about 60 links wide and 3 feet deep, with good water. The valley of the creek contains some fair sized spruce. There is some heavy and small poplar, willow and scrub all along the line. A few small lakes, ponds, &c., occur. The soil is sandy loam, and occasionally clay. Rated class 1 in the east and 2 in the west.—*C. A. Magrath*, 1883.

- 46. Outlines.**—Rolling prairie, interspersed with bluffs of poplar, willows and dry wood. There are numerous ponds of good water. The soil ranks first class, and is either clay or black loam, with clay subsoil.—*P. R. A. Belanger*, 1884.

The eastern boundary crosses and recrosses the valley of a creek several times. There are clumps of timber along the creek, and a few elsewhere. The land is well suited for settlement, containing several tracts of excellent soil. Water good and fresh.—*W. A. Ashe*, 1882.

- 47. Outlines.**—Heavy rolling prairie, somewhat hilly in west half, with a few patches of willows in the eastern portion and bluffs of young poplar, willows and dry wood in west half. It is well watered by ponds and Blackfoot Creek, which runs through its centre in a southerly direction. This is a small stream, about 10 to 20 links broad and 1 foot deep, of excellent water. The soil is a good sandy loam, with clay subsoil, and ranks first class.—*P. R. A. Belanger*, 1884.

On the eastern side of the township, going north, there is brushwood, some scattered clumps of small poplar and a few small marshes. There is also a creek in Section 24. Water is good and fresh in all the ponds and creeks. The land is well suited for settlement, and contains tracts of excellent soil.—*W. A. Ashe*, 1882.

- 48. Outlines.**—North, the surface is mostly rolling prairie, but on Sections 35 and 34 it is knolly. There are numerous ponds, grass and willow swamps, some small poplar, brush, scrub, &c, and on Section 36 some scattered poplar bluffs. The soil consists of black loam, 4 to 12 inches deep, with clay loam subsoil Class 1.—*T. Kains*, 1882.

Is rolling prairie, well watered by ponds, springs and large sloughs, which appears to be the head of Blackfoot Creek. A few patches of willows are seen in the eastern portion. The telegraph line crosses through the township. The soil is sandy loam, with clay subsoil, and rates first class.—*P. R. A. Belanger*, 1884.

The growth of wood in the east is principally brushwood. A trail is crossed in Section 1, the telegraph line in Section 12, a pond and trail in Section 24, a marsh and trail in section 25, and a pond in Section 36. Water is good and fresh in all the creeks. The land is well suited for settlement.—*W. A. Ashe*, 1882.

- 49. Outlines.**—There is brushwood and scattered poplar in the north-eastern part. There is a small marsh in Section 1, and another in Section 25. Water is good in all the creeks. The land is well suited for settlement.—*W. A. Ashe*, 1882.

The south is rolling prairie, with swamps and ponds, and a few poplar and willow bluffs. Soil, a black vegetable mould, 4 to 12 inches deep, on a subsoil of clay or sand loam. Class 1.—*T. Kains*, 1882.

Sub-division.—Is high, rolling prairie, thickly studded with clumps of poplar and willow, large enough for fuel and fencing. The soil is a good clay loam, with occasional small stones. There are several small lakes and ponds of good water, and, as a whole, this township is well adapted for agricultural purposes.—*J. Doupe*, 1882.

- 50. Outlines.**—Along the eastern boundary there is a creek in Section 12, a trail and creek in Section 13, another creek in Section 24, and two ridges, 30 feet high, in Section 36. There are almost continuous clumps of small poplars along the boundary. Water is fresh in the creeks. The land is well suited for settlement.—*W. A. Ashe*, 1882.

Sub-division.—Is rolling land, thickly covered with brush, with numerous bluffs of dead poplar. There are a number of bluffs of green poplar, containing a small quantity of timber fit for building purposes. The soil is a good clay loam, with plenty of fresh water.—*J. Doupe, 1882.*

- 51.** *Outlines.*—The eastern part is crossed by a creek in Section 1, a trail in Section 24, and a creek in a valley in Section 36. There are scattered clumps of small poplar through this township. The water in the creeks is fresh. The land is well suited for settlement.—*W. A. Ashe, 1882.*

Sub-division.—Is rolling land, covered with bluffs of poplar and willow of small size, poplar of about 10 inches in diameter being the largest. There are numerous marshes, and two small creeks of fresh water through the southern part of the township. The northern row of sections is broken by a deep ravine. The soil is a good clay loam.—*J. Doupe, 1882.*

- 52** *Outlines.*—In the north-east half of the township there are scattered clumps of wood, but none in the north-west portion. There is a lake in Section 34, a small pond and a lake in Section 1, and another lake between Sections 1 and 13. There is a creek on Section 25, and two trails in 24. All the surface water is invariably fresh, and the land is of a uniformly excellent character, and well suited for settlement.—*W. A. Ashe, 1882.*

Sub-division.—The north-eastern portion is very rough and hilly, and thickly studded with poplar bluffs and clumps of willow. The remainder is rolling land, with bluffs of poplar and willow and a good deal of scrub and brush. The timber is small, seldom exceeding 8 or 9 inches in diameter. The soil is good clay loam, with clay subsoil. There are several lakes, the largest of which extends from the north-west of Section 15, to the north-west angle of the township. On the whole, this may be considered a fair township for farming purposes, the soil and water being good throughout; but the north-eastern portion is more suitable for grazing than for agriculture.—*J. Doupe, 1882.*

- 53** *Outlines.*—In the south-east portion there are to be found scattered clumps of wood. In Section 3 there is a lake which extends into the township to the south. Going north, on the east boundary, there are small marshes and clumps of poplar. In Section 13 is a small creek and a marsh which falls into the valley of the Saskatchewan River. Along this creek there is some timber. The river crosses between Sections 24 and 25, and is about 40 chains wide. All the surface water is fresh; the soil is of an excellent character, and is well suited for tillage.—*W. A. Ashe, 1882.*

Sub-division.—Generally very rough and hilly. The North Saskatchewan River flows south-easterly across Sections 34, 35, 26 and 25. Its average width is about a quarter of a mile. Both banks are pretty well timbered with aspen, balsam, poplar, and some small birch. The portion south of the river is nearly equally divided by a coulée running south-east into the Saskatchewan. To the north of this coulée the country is generally thickly timbered with light poplar, with occasional trees running up to 10

or 12 inches in diameter, and the soil is a sandy loam. South of the coulée, the bluffs are light and more scattered, but the soil is a good clay loam. The country north of the Saskatchewan is very rough and hilly. Water throughout is very plentiful and good. The township is generally rather hilly for farming purposes, but the soil is excellent.—*J Doupe, 1882-3.*

- 54. Outlines.**—Is generally prairie, with numerous poplar bluffs and tracts covered with scrub. A small portion, lying in the north-easterly corner, has a sandy soil, but the remainder of the land is much better, and will average 2nd class. The township is well supplied with water by numerous small lakes and ponds, and also by the River Saskatchewan, which flows south-easterly through Sections 7, 8, 5 and 4. In these and the adjoining sections the land is somewhat broken by ravines, and by the banks of the river, which are here about 150 feet high; but the balance of the township is mostly rolling land. The most southerly of two high conspicuous hills lies in the north-easterly corner.—*E. Bray, 1884.*

East, scrubby prairie, with soil of fair quality. Ponds of water occur at intervals.—*G. B. Abrey, 1883.*

- 55. Outlines.**—The northerly sections are on high land, covered with woods of small poplar, with occasional small tracts of spruce of fair size. South of these sections the land is mostly rolling, and dotted with bluffs of poplar and scrub, and somewhat broken by ponds, lakes, &c., which are sometimes bordered by belts of spruce. Some of the soil is poor, but, on the whole, will average 2nd and 3rd class.—*E. Bray, 1884.*

Along the east boundary the surface is rough and broken with many ponds and muskegs. The timber is of small size, and is intermixed with patches of spruce, and without any relieving patches of prairie.—*G. B. Abrey, 1883.*

- 56. Outlines.**—Appears to be wholly covered with woods of poplar (generally small), and occasionally spruce and pine of fair quality and size. In some sections the land is rough, though generally it is rolling and broken by lakes, some of which are of considerable size. The soil varies in quality, but will average between 2nd and 3rd class.—*E. Bray, 1884.*

Along the north boundary it is thickly timbered with poplar and scrub, and with patches of spruce in places. The timber is small, and of little value. The land is poor, very rough and broken, and cut up by ponds muskegs, &c., East; broken country, with numerous ponds, lakes and muskegs, and densely wooded with small poplar, intermixed with patches of spruce. The soil is of fair quality.—*G. B. Abrey, 1883.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE II.

5. *Outlines.*—Along the western boundary, in the north and along all the east it is broken and hilly, with surface boulders, and in the south-west it is undulating prairie. The west line crosses Medicine Lodge Coulee on Section 30. In it there is a creek flowing east, along which is some small wood and scrub. The line is also crossed by a creek on Section 31 and by another on the south of 19. The upper soil is—westwards—3 to 5 inches deep, over clay subsoil. Class 2, excepting on Section 19 and the northern half of 31, where it is class 4. Eastwards, it is sandy, with gravelly hill tops. Good pasture in the valleys. Between and on Sections 25 and 36 is a valley containing a creek flowing east. There is also another small stream on Section 1.—*C. E. Wolff*, 1883.

Along the southern boundary, rolling prairie, with dry, stony soil. Willow Creek flows southward through Medicine Lodge Coulee, which, at this point, is about one and a-half miles wide, and occupies adjoining portions of Sections 2 and 1.—*O. J. Klotz*, 1883.

6. *Outlines.*—West, very broken and hilly country, covered with small boulders. Soil, sand and gravel, with clay and gravel subsoil. East, undulating country, with sandy loam soil mixed with gravel. There are many coulees along the line.—*C. E. Wolff*, 1883.
7. *Outlines.*—West; surface, rolling and level prairie. A creek, flowing south, follows the course of this line along the first four northerly miles, after which it turns and flows westward. There is some excellent grazing land along this line, particularly on Sections 30 and 7. Soil, gravelly in the north; sand and clay in the south. Rated class 2 throughout. The south-eastern half is rolling, but in Section 24 the surface rises to the Cypress Hills plateau, which possesses an excellent soil.—*J. G. Sing*, 1883.

Sub-division.—This township is rolling or undulating prairie, with a very stony surface from the south base of the Cypress Hills—which occupy the north of the township—to the southern boundary. The southern slope of the hills is gradual, but much cut up by ravines, in which small creeks flow south to the plain. The summit of the hills is undulating prairie, with a deep black loam soil. No wood.—*J. F. Snow*, 1884.

8. *Outlines.*—Going south, on the west boundary, it is, for the first two miles, rolling prairie. Along the third and fourth mile, somewhat broken, and covered with poplar, spruce, tamarac, brulé and windfalls. This is on the slope of the Cypress Hills, the bottom of which is very marshy. Immediately west of this point is a body of good water, called Elk Water Lake. The hill plateau is level, and is crossed by the Fort Walsh trail. Soil, principally of gravel formation, with some sandy loam toward the north. Along

the wooded portions the soil was in some places burnt off by bush fires but may be, rated class 2, on the hill plateau, class 3 on the two northern sections, and class 4 on Sections 18 and 19. Over towards the east the summit plateau of Cypress Mountain, with a fine soil, occupies the south-east half. Then the surface descends to the north, with a very rolling and coulée-furrowed surface, and considerable growth of wood.—*J. G. Sing*, 1883.

Sub-division.—The portion lying south of the northern crest of the Cypress Hills is gently-undulating, with rich black loamy soil. The northern slope of the hills is very rough, and covered with a dense pine brulé and windfalls. Some of this timber is still suitable (1884) for lumber. There are two large marshes in the north-west corner, one of which is a floating bog, dangerous to cross at any point.—*J. F. Snow*, 1884

9. *Outlines.*—West, rolling prairie. Ross Creek flows through Section 31, crossing the line nine times within the mile. The water of this stream is excellent; its average width is about 13 feet. There is also a small spring creek in the south of Section 18, flowing north-west, and a number of ponds of good water in Sections 7 and 6. Eastwards, the surface is also rolling, although considerably broken towards the south by a number of lakes and ponds. In Section 1 a creek flows westward from a lake a few chains east of the line. There is no water in the northern sections, and no wood. Soil, clay, gravel or gravelly clay. Class 3, on both sides of the township.—*J. G. Sing*, 1883.

Sub-division.—Rolling prairie. Soil, grey clay, and clay mixed with stones on all clay subsoil. Classes 2 and 3. Two cart trails cross the township. All the creeks dry as the season advances, but there are in the south many good clear-water marshes. The southern portion is excellent for grazing. The northern portion is more adapted for agricultural purposes.—*J. E. Sirois*, 1883.

10. *Outlines.*—For the first four miles northward the surface is rolling prairie. Ross Creek follows the east side of the line to Section 13, where it passes to the west of it. At this point there is considerable timber, and also on the southern half of Section 31, where the creek again passes near the line. Soil: in Sections 18 and 19 clay, and in the other sections, generally, clay or gravel. Class 3, excepting in Section 6 and the southern portions of 7 and 19, where it is class 2. Eastwards, it is rolling prairie, very stony in the three southern sections. No wood or water. Soil, clay gravel, or gravelly clay. Class 3 everywhere, but in the northern half of Section 24, where it is class 2.—*J. G. Sing*, 1883.

Sub-division.—All rolling prairie. Soil, grey clay, and clay and stones. Classes 2 and 3. Some very good for agricultural purposes. The north-west and south-east corners, and, in fact, most of the west half, is more or less broken by dry creeks and high banks. Two trails cross the township. Water is scarce. No wood.—*J. E. Sirois*, 1883.

11. *Outlines.*—Sections 30 and 31 are hilly and broken, but south of these the country is generally rolling. In Sections 31 Ross

Creek, which flows northward through the next range, crosses the line several times. A little north of this the C. P. R. and the trail to Medicine Hat. On Section 30 is a succession of stony hills and hollows, among which is considerable coal. There is no wood, excepting a little on the banks of Ross Creek. A trail to the Cypress Hills for wood and timber courses through the western tier of sections. Soil, chiefly clay, class 2, but on Sections 6 and 30, and the southern half of 31, it is gravelly, and rated classes 3 and 4. On the east side of the township Sections 36 and 25 are in an alkaline flat, class 3; the rest is rolling prairie, broken at intervals by deep coulées, some of which are stony. On the central and southern sections, particularly the latter, the soil is clay loam; classes 1 and 2.—*J. G. Sing*, 1883.

Sub-division.—Rolling prairie. Soil, sandy loam, on grey clay subsoil; class 2. In places deep coulées and ravines occur, with wood in them suitable for fuel. Water is scarce. The C. P. R. crosses Sections 25 to 31. Irvine Station is located here.—*F. Vincent*, 1883.

- 12. Outlines.**—North, the country is very hilly; there are numerous ponds in these hills. The soil on the hill tops is sand and gravel, but in the bottom of a fair quality. In many places the surface is stony.—*C. A. Magrath*, 1882.

This township is rolling in the west and the south-east, and broken and hilly in the north-east. The soil is sandy and clay loam, west, class 1, and in the east classes 2 and 3, and occasionally 4. The northern half of Section 25 is an alkaline plain; and in the north part of Section 36 is a marsh. The land is well adapted to farming, but wood and water are somewhat scarce.—*J. G. Sing*, 1883.

Sub-division.—Rolling prairie. Soil, a good sandy loam on clay subsoil; class 2. Water scarce. No wood. Some deep coulées occur.—*F. Vincent*, 1883.

- 13. Outlines.**—Surveyed the north, west and east of this township. It is generally rolling prairie, with some heavily-rolling portions. The depth and quality of the soil varies. It consists of a sandy loam over a sandy subsoil, and is rated class 2 in the south and class 3 in the north. There are several alkaline ponds in the eastern portion, and in the north there are a few good springs—a large one in Section 34. The grass, generally, is fair. There is no wood.—*P. R. A. Belanger*, 1882.

The southern part of the country is very hilly, with alkaline ponds in the hills. The soil on the hill tops is sand and gravel, but in the bottoms it is of a fair quality.—*C. A. Magrath*, 1882.

Sub-division.—Level and rolling prairie. Soil, sandy loam, of fair quality for agriculture, but with a scanty supply of water, except in the northern portion, where there are some living springs, some of them impregnated with sulphur and iron.—*C. E. Towle*, 1883.

- 14. Outlines.**—Surveyed all the outlines of this township. The soil is generally sandy, with gravel hills and rolling prairie. Good water is rather scarce. There are several alkaline ponds. The

grass is fairly good. A stretch of marsh, nearly a mile in length, extends south-westwardly in Section 36. In the north of Section 1 is a small lake, and in the south-west corner there is a large one.—*P. R. A. Belanger*, 1882.

Sub-division.—Northwards, it is level and rolling prairie; southwards, it is more hilly and broken by valleys and ravines. Soil, sandy loam, class 2, mixed, in the more hilly portions and ridges, with gravel and stones. A large alkaline lake lies in the south-western corner, but elsewhere, fairly good water is obtainable. The township is good for grazing.—*C. E. Towle*, 1883.

- 15. Outlines**.—Surveyed north, east and south outlines. The surface of the country is rolling prairie. Water is scarce; but the soil and grass, which are much the same as in Township 13, are pretty fair.—*P. R. A. Belanger*, 1882.

Along the western boundary, for the first three or four miles, going north, the line passes within, and afterwards immediately west of a shallow valley, about half a mile wide, which extends throughout the township. In the northern part of this valley is a creek flowing south, which is joined by another flowing west through a branch ravine. The soil has an average depth of about 8 inches, on a clay subsoil, and is rated class 2.—*J. A. Maddock*, 1882.

Sub-division.—Well suited for agricultural purposes. Soil, sandy loam and clay loam, well supplied with water in numerous small sloughs, some of which are fresh, some slightly alkaline. The surface of the country is generally rolling prairie, broken in places by hills and ravines.—*C. E. Towle*, 1883.

- 16. Outlines**.—Northwards, the country is hilly prairie, strewn with some boulders, and having a small number of wet marshes. The soil is a fair sandy loam; grass pretty fair. The country appears more rolling to the south.—*O. J. Klotz*, 1882.

The western line was run over all-rolling prairie, with a sandy loam soil. The south-east is heavily rolling.—*J. A. Maddock*, 1882.

South and east, rolling prairie, with a sandy loam soil, having a good growth of grass, a few small creeks and marshes. Fair agricultural land.—*P. R. A. Belanger*, 1882.

Sub-division.—Very hilly and broken. Soil, sandy loam. Class 2, on clay subsoil, generally best for grazing, but suitable for tillage in the bottoms and lower levels. No wood.—*C. E. Towle*, 1883.

- 17. Outlines**.—Surveyed north, west and east boundaries. Hilly country. Soil, light sandy loam, 6 to 18 inches deep, class 1, with sandy and sometimes gravelly subsoil. Sections 35 and 36, and part of the east boundary, are undulating. On Section 7 the west line crosses a valley 120 feet deep, in which there flows a winding creek, with marshy shores. On Section 1 the line crosses an alkaline pond about half a mile wide. A couple of small sloughs are crossed in Section 36. No timber.—*H. C. Denny*, 1882.

Going west on the south boundary, the east end lies in a small alkaline lake. All along the line the surface is inclined

to hilliness, with some small marshes in the bottoms, a fair sandy loam soil and growth of grass.—*O. J. Klotz*, 1882.

Sub-division.—Hilly and rolling prairie. Soil, clay loam on clay subsoil. Class 2. Numerous fresh-water marshes occur, and the pasturage is rich and abundant. The summits of the hills are gravelly and stony. No wood.—*J. McLatchie*, 1883.

18. *Outlines.*—All the west and south of the township consists of hilly country, except in the east, where it is undulating prairie. Generally the soil is light, sandy loam, from 8 to 18 inches, in depth with sandy subsoil. Some stones occur occasionally. Where the surface is hilly the altitudes are from 30 to 150 feet, the summits having stones and boulders. The grass is short, and there is no wood and very little water, the sloughs drying up early in the season.—*H. C. Denny*, 1882.

Sub-division.—The eastern portion, rolling and undulating; small fresh-water marshes and good pasturage. Soil, the western portion rolling, with several high, gravelly ridges; fresh-water scarce, but pasturage fair. Soil, classes 2 and 3. The soil is a clay loam over clay, and class 2 generally, but there are occasional intervals of sandy loam over clay, and particularly in the northern tier of sections poor sand loam over sand.—*J. McLatchie*, 1883.

19. *Outlines.*—This township is rolling prairie, except within the influence of the Saskatchewan River, which traverses it in a north-easterly direction, from Section 19 to 36. The river has broken and precipitous banks, which have coulées extending from them for miles. On Section 36 is a creek flowing east and entering the river. The surface of this section is consequently much broken by the banks of both streams. Sections 25 and 24 have a few sandhills, but southwards from thence the surface is covered with hills of drifting sand. The soil elsewhere classes 2 and 3, except on Section 36, where it is gravel mixed with clay.—*J. G. Sing*, 1883.

Sub-division.—The South Saskatchewan River enters by Section 18 and leaves by 36. It has a swift current, is about 12 chains—about 800 feet—broad, and 3 to 8 feet deep. The banks, for a mile inland on either side, are much broken by ravines and coulées. The south-eastern portion of the township is very sandy and covered with willow and cherry scrub. Water scarce, except in the river. The rest of the township, both north and south of the river, is rolling, with a sandy loam soil. Classes 2 and 3 and fair for agriculture.—*J. McLatchie*, 1883.

20. *Outlines.*—North, the three eastern sections are level; the rest, rolling prairie, excepting 31, which is hilly. No wood or water. Soil, sandy loam over sand; rated class 4 on Section 31, and class 3 on all the rest.—*T. Drummond*, 1882.

The west side of the township is rolling prairie, with numerous sandhills on some sections. Soil, sand or sandy loam, which is class 2 over the west centre, and classes 3 and 4 elsewhere. No wood or water. The eastern side is very much broken by the banks, and the numerous ravines, hills, &c., leading therefrom, of the South Saskatchewan River, which, after passing across the south-east corner of Section 1 turns, and flows

northward some distance east of the line for about five miles. Soil, on Sections 36 and 12, sandy loam (or light clay) ; class 2. Elsewhere, it is chiefly clay, mixed with sand or gravel, except on Section 1, where it is pure clay, and is rated class 4.—*J. G. Sing*, 1883.

Sub-division.—The South Saskatchewan River crosses Section 1, where the country is much broken by ravines from 100 to 300 feet deep. The southerly portion of the township is very sandy, as is also Sections 28, 29, 32 and 33. Fresh-water marshes are scarce. The remainder of the township is undulating prairie, with clay and sandy loam soils ; class 2, and well suited for settlement.—*J. McLatchie*, 1883.

- 21. Outlines.**—The southern half is principally rolling prairie, light sandy soil and gravelly knolls, the north-east half being undulating and rolling prairie, with sandy loam soil and clay or marl subsoil.—*C. F. Miles*, 1882.

Along the south boundary, as far as Section 6, the land is 3rd class. That section is sandhills in many places, with no signs of vegetation. Fourth class.—*T. Drummond*, 1882.

Sub-division.—Undulating prairie. Soil, sandy loam, of poor quality for agricultural purposes. Some portions with a clay loam soil occur, which may be utilized for farming or grazing. Considerable surface water may be found in marshes. No wood.—*C. G. Sheppard*, 1883.

- 22. Outlines.**—The north half is more or less broken by the Red Deer River and its high clay banks, which are precipitous in places. The river is very tortuous, has a rapid current of three miles an hour, and is full of sand bars, the depth in the main channel being from 6 to 10 feet. The soil in the valley consists principally of a very stiff clay, with but poor vegetation, and in some places covered with blown sand. The timber, of which there is a fair quantity in the valley, consists of cottonwood, reaching the dimensions of about 18 inches in diameter, and generally accompanied by a dense growth of underbrush. The south part is very fair, and consists of rolling prairie, with a sandy loam, 12 to 18 inches in depth, with subsoil alternately sandy loam or marl. Class 1 on all, except Section 6, where it is class 2.—*C. F. Miles*, 1882.

Sub-division.—Rolling and undulating. The Red Deer River enters on Section 30 and encircles the four north-west sections. It has a current of about three miles an hour and a channel of 6 feet deep, with a bank belt of small birch and underbrush, and some cottonwood. The banks are broken inland by ravines, and are sandy and gravelly. The rest of the township is sandy and clay loam. Classes 2 and 3.—*C. G. Sheppard*, 1883.

- 23. Outlines.**—Is rolling prairie, with a few sloughs (dry in August), and broken by coulées near the Red Deer, two of them extending all the way across the township. Soil, heavy clay, except in the river valley, where it is either strong clay or sandy loam. Water is scarce, what there is, being strongly alkaline. The Red Deer River runs close to the south side of the township, nearly all the way across. The river is rapid, with an average width of 25

chains, but in some places over half a mile. The main channel is from 5 to 7 feet deep. Numerous sand bars, which are constantly changing their position, divide the stream into several shallow channels. There is some lumber along the river.—*A. W. McVittie*, 1882.

Sub-division—Northwards, the surface is gently-rolling and undulating. Where the hills occur they are gravelly and stony. The soil is, however, good clay and sand loams, and suitable for settlement and tillage. No wood. A number of creeks flow south to the Red Deer River, which crosses the south-east part of the township.—*C. G. Sheppard*, 1883.

- 24. Outlines.**—Surveyed the west, south and east. The eastern side is rolling prairie, with a few sloughs (dry in August), and broken by coulées. The soil is heavy clay. Water is scarce, and some of it alkaline. There are several creeks flowing southwards across the township, tributary to the Red Deer River.—*A. W. McVittie*, 1882.

Northwards, rolling, ridges gravelly, sometimes covered with granite boulders; the flats generally fair, loamy clay. Good grass everywhere. A few small meadows. Very little water. Subsoil generally hardened clay.—*W. Ogilvie*, 1882.

Sub-division.—Level and undulating prairie. Soil, clay loam generally, and class 1. Excellent land for agricultural purposes. A creek crosses the township in a south-easterly direction, with steep and high banks towards the south.—*C. G. Sheppard*, 1883.

- 25. Outlines.**—This township is undulating and rolling. Soil, generally clay loam, over clay. Class 1, with a few intervals of sandy loam over sand, the average depth of surface soil being about 12 inches. No wood and little water, there being only a small creek crossing the township from north to south, which was dry at time of survey (6th August.)—*C. F. Miles*, 1883.

Southwards, the surface is rolling; ridges gravelly, sometimes with granite boulders; the flats generally fair, loamy clay; good grass everywhere; a few small meadows; very little water. *W. Ogilvie*, 1882.

Sub-division.—In the south-east the surface is highly-undulating; the remainder is gently-rolling. The soil is composed, in some places, of clay loam, and in other places of sandy loam, and is excellent for agriculture and pasturage. No wood.—*C. G. Sheppard*, 1883.

- 26. Outlines.**—The western and eastern sides consist of rolling prairie, with a fair supply of surface water in the north-west, but scarce elsewhere. The soil is principally clay loam, averaging about 13 inches, on a clay subsoil. Class 2, excepting on half of Sections 6 and 7, where it is gravel, over clay, and is rated class 3, and on Section 1, where it is class 1—*C. F. Miles*, 1883.

Sub-division.—Rolling prairie. Good water in the sloughs and marshes, and excellent grass. Soil is generally a good clay loam on a clay subsoil, and in a few places a sandy loam on clay subsoil. Class 2. No wood.—*J. Dudderidge*, 1883.

2 . *Outlines.*—Rolling prairie westwards, with some low, hilly prairie to the east. There is no wood, and water is generally scarce. Soil, on the southern sections, clay loam, 12 to 18 inches deep, over clay. On the central sections it is either clay loam over alkaline clay, or sandy loam over sand, with an average depth of 14 inches of alluvial soil. Northwards there is much gravel loam, 10 inches deep, over sand. The rating is generally class 2 everywhere, except in the north-west, and in Sections 13 and 25, where it is class 3.—*C. F. Miles, 1883.*

28. *Outlines.*—Northwards, the soil is a rich clay loam, some 18 inches in depth, the surface gently-undulating, and the country nicely watered by ponds and sloughs, mostly fresh. A small stream, 4 feet wide and 4 inches deep, bearing south to a small lake, was crossed in Section 36.—*T. Fawcett, 1883.*

Generally it is rolling prairie, with a few ponds. The southerly tier of sections is more or less hilly, and is broken by lakes and ponds, and here it rates 3rd class. Section 31 is also hilly, with knolls and a few sloughs. On Section 7 there is a creek, originating in a marsh immediately west of the line. Soil, generally, on the west side, sandy loam, sometimes gravelly, averaging about 10 inches in depth, on a sandy subsoil. Class 2. On the east side it is clay loam, 10 to 18 inches deep, on a clay subsoil. Rated class 1, except on Section 1, where it is classes 2 and 3. No wood, and little water in the township.—*C. F. Miles, 1883.*

29 *Outlines.*—In the south-west half is rolling, with a few scattered hills; the remainder is hilly, with numerous ponds and lakelets. Stones are plentiful on the hill tops. Good water is abundant. No timber of any kind. The soil ranges from quite a light sand loam at the south to a very fair sand loam at the north. Classed from 1 to 3.—*F. W. Wilkins, 1884.*

The soil, southwards, is a good clay loam, of a considerable depth. The surface is gently-undulating, with a good supply of ponds and sloughs, which are mostly fresh. Sage bush is growing in places, but no large wood.—*T. Fawcett, 1883.*

30, *Outlines.*—Is rather hilly in general, rising to quite a high range of hills at the extreme north. There is both good and bad water in abundance. No timber. The land, though hilly, is not very stony. The soil is about equally divided between sand loam and clay loam, and, as a rule, is very good. Classed from 1 to 3.—*F. W. Wilkins, 1884.*

31. *Outlines.*—Is in general of a rolling character, having the central southern portion rather hilly. Sounding Creek, a slightly saline stream, with a soft, muddy bottom, averaging about 15 inches in depth and 20 feet in width, with very slow current, meanders along a wide saline flat, with a general north-east course, and crosses the north-west angle of this township. Good water is not plentiful. No timber of any kind. The soil, except in the creek flat, is very good, being sand loam and clay loam. Generally classes 1 and 2, with some 3 and 4.—*F. W. Wilkins, 1884.*

32. *Outlines.*—Along the northern boundary, for the first $4\frac{1}{2}$ miles, going west, the surface is rolling prairie, and from thence hilly,

descending towards and into a marshy valley on the western half of Section 31, in which is a sluggish stream about 16 rods wide. The line also crosses several small marshes, most of which are on Section 33. The soil consists of clay loam, averaging about 8 inches in depth, on a clay subsoil. Rated class 2, except on Sections 31 and 32, where it is class 3.—*E. Bray*, 1883.

The west half is either composed of sand knolls, or lies in the wide saline flat of Sounding Creek. The east half is rolling to hilly at the north, with some stony tracts. This is badly cut up in the central part by Sounding Creek (a little saline), which, at the extreme north, is over a chain in width, and in general about 3 feet in depth, with no perceptible current. The general course of this stream is northerly, but its bed is very tortuous. Good water is not plentiful in the west part, but in the east is fairly abundant. No timber. The soil varies all the way from pure sand to almost pure clay. Classed from 2 to 4.—*F. W. Wilkins*, 1884.

- 33.** *Outlines.*—Is mostly rolling in character, with some hilliness both at the north and south. Sounding Creek—very wide, deep, muddy and slow—crosses the south-west angle, having a general north-west course. The water in the creek is hard. There is considerable stony land. Good water is plentiful throughout. No timber. Soil, sandy loam. Classes 1 to 3, with some 4.—*F. W. Wilkins*, 1884.

South, the surface is mostly rolling. Sounding Creek crosses in a marshy valley about a third of a mile wide, in the western portion of Section 6. A number of small marshes are on Section 4. The soil consists of clay loam, class 2, except on Sections 5 and 6, where it is class 3.—*E. Bray*, 1883.

- 34.** *Outlines.*—Is, in general, hilly, with numerous ponds and lakelets of both good and bad water distributed over it. Stones are abundant in places. Some nice tracts of rolling land—though small in extent—are to be found here and there. Good water is plentiful. No timber. The soil is generally very good, being a sand loam of more or less weight. Classed from 1 to 3.—*F. W. Wilkins*, 1884.

- 35.** *Outlines.*—Is, in general, very hilly, with a few small nice tracts of rolling land. The hills rise to a very high range near the north boundary. On the hill tops stones are plentiful. Water, both good and bad, is abundant in ponds and marshes. No timber of any kind. The soil is, in general, a good sandy loam. Classed from 1 to 3.—*F. W. Wilkins*, 1884.

- 36.** *Outlines.*—The greater part of the country along the north boundary is in the valley of Eye Hill Creek, and consists of rolling prairie, gradually growing more smooth toward the west, till on Section 31 it becomes undulating. For nearly two miles, however, beginning about half-way on Section 36, the line passes along the range of hills bounding the valley on the south side. On these hills there are some boulders and large stones. Westward there are a few more boulders, and a number of hay marshes, ponds and swamps. There is no wood, except some poplar bush in the east

of Section 36. Soil: in the east, sand; on the central sections, sandy loam, 2 to 8 inches deep, on a sandy subsoil; and in the west, clay. It is rated class 1 on Sections 33 and 32, and class 2 on the rest. A range of high hills, running in a westerly direction, was noticed about four miles south of the line.—*T. Kains*, 1883.

Is rolling in the northern part, but at the south rises to a high range of hills. The tops of the hills are stony. A few small clumps of small poplars (for firewood and rails only) may be found near the extreme north. Good water is reasonably abundant. The soil over the northern two-thirds is light—in places pure sand and drifted. In the southern and hilly portion the soil is very good—mostly sand loam. Classed from 2 to 4.—*F. W. Wilkins*, 1884.

- 37. Outlines.**—This township is traversed in the southerly end by Eye Hill Creek, running easterly in a valley from 70 to 100 feet deep, containing marshy land with long grass. A small quantity of poplar may be found along the southern boundary. The remainder is open, high and rolling land, which becomes hilly along a part of the western boundary. The soil varies from a loam and clay loam, in the west and northerly parts, to sandy loam in the south-east, and is classed from 1 to 3.—*J. F. Garden*, 1884.

Proceeding along the southern boundary, Sections 1 and 2 consist of hilly prairie. The remaining sections are undulating prairie, and have a sandy loam soil. There are a few grass swamps scattered along the line.—*T. Kains*, 1883.

- 38. Outlines.**—Is an open prairie, with hills and valleys, and some large ponds in the south-west, the remainder of it having generally a rolling surface. Some large ponds are also found in the south and east, with good grazing about them and in the hollows. Thick pea-vines and vetches make the north-westerly parts particularly good for pasturage. The soil varies from clay loam in the south to sandy loam and sand in the north, and is classed from 1 to 3.—*J. F. Garden*, 1884.

- 39. Outlines.**—A long narrow lake, running east and west, crosses the southerly end of this township. The easterly half is generally high and rolling or hilly, the west being rolling or undulating. It is without wood, except a small bluff of poplar on the south branch of the lake above mentioned. In the north-east the southerly end of another long lake extends into it about one and a-half miles, the water in both of them being fairly good. Some permanent water was found in sloughs, with good grasses about them. The soil varies from loam and clay to a small area of low sand ridges in the south, and is classed from 1 to 4.—*J. F. Garden*, 1884.

- 40. Outlines.**—The surface along the north boundary is principally rolling. There is a small creek on the west of Section 35 and a few small marshes on 36. No wood. Soil, black loam, 4 to 12 inches in depth, on a sandy, and sometimes stony, subsoil.

Class 2 on Sections 32 and 33, but class 1 on the rest.—*C. A. Magrath, 1883.*

Has a rolling, open surface. A long, narrow lake extends north-westerly from the south-east corner for three or four miles. Numerous sloughs and ponds with permanent water occur in the easterly part, with good grazing about them. The soil here is a black loam, and classed 1. In the westerly portions the soil changes from clay loam to sandy loam, and is classed from 1 to 2.—*J. F. Garden, 1884.*

- 41. Outlines.**—The north-easterly quarter is hilly and sandy, with a small quantity of poplar. The remainder is open. A valley leads into the north-east corner, containing alkaline bottom lands and a small running brook, which empties into the lake in Township 41, Range 1. Another valley crosses the southern end in an easterly direction. The rest of the township has a rolling surface, except in the north-west corner, where it becomes hilly. A number of sloughs and ponds are scattered over the surface. The soil varies from sandy to clay loam. Classes 1 to 2. Soil, generally, clay loam, 10 or 12 inches deep, over clay, for the easterly southern two-thirds, from which point, northwards, it is sand or sandy loam, over sand. It is rated class 1 on the southern, class 2 on the central, and classes 2 to 3 on the northern divisions.—*J. F. Garden, 1884.*

Southwards, it is rolling and hilly. Poplar bluffs were seen from three to five miles north of the line. There are also several sand hills. The soil, however, is generally a black loam, 4 to 12 inches deep, with sandy and, sometimes, stony subsoil. Class 2 on Sections 4 and 5, but class 1 on the rest.—*C. A. Magrath, 1883.*

- 42. Outlines.**—The northern boundary is crossed by a high range of hills in Sections 33 and 34, which extend southerly through the township. The north-east and north-west portions are undulating sandy land, and the remaining area is rolling or hilly. Along the western boundary the country is open. Bluffs of poplar may be found scattered over the rest of the township. There are also numerous ponds, with good grazing about them, scattered about. Southwards, the soil is sand, class 4, but it improves gradually towards the central portion of the township, where there is a broad belt of better soil—sometimes gravelly—which consists chiefly of clay loam, 12 inches deep, over clay. Classes 2 and 3. On the north-easterly, one-third it is also rated classes 2 and 3, but consists, principally, of sandy loam over sand.—*J. F. Garden, 1884.*

- 43. Outlines.**—Ribstone Creek crosses the west boundary in Section 7 and runs north-east, crossing the northern boundary in Section 34. A high range of hills extends south-westerly through it, from Sections 34 and 35. The west part of the township is thickly covered with willow and scrubby poplar, the soil here being sandy loam, classes 1 to 2. Along the northern boundary the country is bare of brush, but over the remainder of the township scattered clumps of poplar are frequent. Adjoining the eastern boundary the surface is knolly and broken, except in

Section 12, where a sandy open valley enters it and extends west. On the high land the soil is loam or clay loam, and is classes 1 to 3. Numerous ponds, with capital grazing about them, are situate in this township.—*J. F. Garden*, 1884.

44. *Outlines*.—Northwards, the surface is rolling. A few ponds and several swamps are to be found. Poplar bluffs are frequent, and of considerable magnitude; but the timber, although from 4 to 8 inches in diameter, is rotten at the heart, and unfit for building purposes. Soil, sandy loam; on the two eastern sections class 1, on the rest, class 2.—*T. Kains*, 1883.

Has a gently-rolling or undulating surface, with a small quantity of poplar and willows. Ribstone Creek runs northerly along the eastern boundary, in a valley which gradually deepens to 150 feet, where it leaves it in the north-east corner. Along this valley the most bush in this township may be found. Some of the poplar trees are 12 inches in diameter and fully 50 feet clear. The central and southern part appears to have but little bush. A good many ponds and sloughs, with good grazing, about them. The soil varies from dark, sandy loam in the west, to sand in the east, and is classed 1 to 4.—*J. F. Garden*, 1884.

45. *Outlines*.—Gently-rolling prairie, interspersed with numerous bluffs of poplar, mixed with willows and dry wood. It is broken in its north half by the Battle River, the valley of which is about the same width and depth as already described in Township 45, Range 1. Groves of large cottonwood—mixed with thick willows, birch and small cherry—may be seen in the valley along the shores of the river. Good water is in abundance. The soil is either clay or clay loam, of a first class quality.—*P. R. A. Belanger*, 1884.

Southwards, a few ponds and several swamps are to be found. The soil is sandy and clay loam. Poplar bluffs are frequent, and of considerable size.—*T. Kains*, 1883.

46. *Outlines*.—Gently-rolling prairie, interspersed with bluffs of young poplar, willows and dry wood. There is good water in quantity in deep ponds. The soil ranks first class, being clay or clay loam, with clay subsoil.—*P. R. A. Belanger*, 1884.

47. *Outlines*.—The soil is a good sandy loam, with a clay subsoil. The country is generally rolling prairie, interspersed with clumps of small poplar, dry wood and willows, increasing in extent along the south boundary. There are numerous ponds and lakelets, mostly of excellent water. The Battleford and Edmonton trail crosses through this township. Heavy-rolling prairie, but hilly in the south-east quarter. The soil is a good sandy loam, with clay subsoil, well watered by numerous ponds and lakelets. Patches of willows and small poplar appear here and there.—*P. R. A. Belanger*, 1884.

48. *Outlines*.—Northwards, it is high, hilly prairie, with numerous ponds or small lakes and swamps, which, in places, have a border of small poplar and willows. Soil, first class quality, being a black vegetable mould, varying from 4 to 12 inches in depth, with a subsoil of clay or sand loam. There are two or three running

creeks in the east, and a couple more in Section 31, one of which drains a large grass swamp in the eastern half of it.—*T. Kains*, 1882.

- 49. *Outlines.***—Southwards, the soil is a black loamy mould, overlying a subsoil of clay or sandy loam, and is rated class 1. The surface of the country consists of high, hilly prairie, in the valleys of which there are ponds, swamps and even small lakes, many of which are bordered with small poplar and willows.—*T. Kains*, 1882.

Sub-division.—Is rough and hilly prairie, with numerous bluffs of small poplar, fit for fencing and fuel. There are a number of small lakes and marshes throughout the township; in fact, nearly every quarter-section has on it a pond of good fresh water. The soil is an excellent clay loam, with but few stones.—*J. Doupe*, 1883.

- 50. *Sub-division.***—Is rolling land, rather rough in the southern part, being broken by a deep coulée. Wood fit for fencing is very plentiful, the northern portion of the township being covered with bluffs of poplar and willow, interspersed with prairie openings. There are a few bluffs of poplar large enough for building purposes. The water is excellent. The soil is clay loam, upon which the wild grasses are of a luxuriant growth.—*J. Doupe*, 1883.

- 51. *Sub-division.***—Is undulating prairie, thickly studded with bluffs of burnt poplar and willow, of a size suitable only for fencing and fuel. There are also a few bluffs of green wood. Small ponds are numerous, and there are several creeks of good water traversing the township. The soil is a rich black loam, with clay and sandy subsoil.—*J. Doupe*, 1883.

- 52. *Outlines***—Along the north boundary the line crosses a lake in Section 36, creeks in 31 and 35, and a marsh in 34. The timber is small sized poplar, in clumps, with much underbrush. The land is of an almost uniformly excellent character, and the water almost universally fresh.—*W. A. Ashe*, 1882.

Sub-division.—Consists of rolling land. The north half is pretty well covered with bluffs of small sized poplar, with thick brush and willows. The south half is more prairie than timber. The soil throughout is first class black clay loam. The timber is fit only for rails and fuel, with occasional trees large enough for house logs. The water is very good. In the southern part of the township is a beautiful lake, four miles long. Its outlet flows north-west to the Vermillion River. On the whole, the township is well suited for farming purposes.—*J. Doupe*, 1882.

- 53. *Outlines.***—The southern boundary line crosses a lake in Section 1, a marsh in Section 3, and creeks in Sections 2 and 6. Small sized poplars grow in clumps, with much underbrush. The land is excellent, and the water is generally fresh.—*W. A. Ashe*, 1882.

Sub-division.—Rolling prairie, with bluffs of dead poplar and willows and green poplar scrub. The soil is a beautiful rich,

black loam, except in Section 36, where it is inferior. In the central portion of the township several small creeks flow from marshes, and, joining together, flow north-westerly in a deep coulée. The water in the creeks is good, as is also that in the small lakes and ponds. The timber is only fit for rails and fuel. The township is well adapted for agricultural purposes.—*J. Doupe*, 1882.

- 54. Outlines.**—Is a mixture of prairie, poplar bluffs and scrub, and has a soil which is generally of good quality. The Saskatchewan River enters in Section 18, and after flowing in a north-easterly direction for a distance of four miles, bends to the south-east and makes its exit in Sections 12 and 13. The banks of the river are from 150 to 180 feet high, and consequently the adjoining sections are broken and hilly, but the remainder of the township is composed of rolling land, with plenty of lakes and ponds, which furnish good, fresh water.—*E. Bray*, 1884.
- 55. Outlines.**—The westerly half is composed of rough and hilly land, mostly covered with bluffs of small poplars and scrub, and broken by almost countless small lakes and ponds. The south-easterly part is a rolling country, being prairie, alternating with woods of poplar and scrubby land, which is joined on the north by a low, swampy tract, mostly timbered with spruce or poplar, which again changes to high, dry land in Sections 36 and 35. The Fort Pitt and Edmonton cart trail passes diagonally through this township, from Section 1 to Section 31, along which light sandy land is often seen, though elsewhere the soil is mostly of fair quality.—*E. Bray*, 1884.
- 56. Outlines.**—The whole northerly and easterly portion (comprising about three-fourths of this township) is rolling land, covered with woods of small poplars, with occasional bluffs of spruce and pine, which often attain a fair size; while the south-westerly one-quarter is very rough land, broken by ponds, &c., and mostly covered with woods of small poplar and scrub. The Frog Lake Indian Reserve lies partly in the north-westerly part of this township.—*E. Bray*, 1884.

Along the north boundary it is thickly timbered with poplar and scrub, and with patches of spruce in places. The timber is small and of little value. The land is poor, very rough and broken, and cut up by ponds, muskegs, &c.—*G. B. Abrey*, 1883.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE III.

5. *Outlines.*—This township consists of broken and hilly country, greatly cut up with coulées, and the surface in many places covered with small boulders. The soil is composed of sand, and sandy loam and gravel, on a clay and gravel subsoil.—*C. E. Wolff*, 1883.

Along the south boundary, rolling prairie. Several creeks flow toward a common centre along the middle portions of this line. Soil, somewhat hard and clayey. There is no wood.—*O. J. Klotz*, 1883.

6. *Outlines.*—Broken and hilly country, greatly cut up with coulées in the east, but also somewhat in the west. The surface is in places covered with small boulders. The soil is sand and gravel, resting on a clay and gravel subsoil.—*C. E. Wolff*, 1883.

7. *Outlines.*—The west is rough and broken, especially on Sections 24 and 25, the vicinity of which is heavily timbered with spruce, poplar and hazel. Soil, sandy or gravelly loam, chiefly classes 3 or 4. The east is rolling and level prairie. A creek follows the boundary line along the first four northerly miles, and then flows westward. There is some excellent grazing land, especially on Sections 25 and 12. The soil is gravel—mixed in the north and clay in the south, and class 2 throughout.—*J. G. Sing*, 1883.

8. *Outlines* —Along the north boundary rolling prairie, with numerous ponds. Soil, a good dark, sandy loam. No wood.—*O. J. Klotz*, 1883.

The west is hilly and stony. Soil, gravelly or sandy loam, chiefly class 4. There are creeks of running water on Sections 6 and 31. The north-eastern sections are rolling prairie. The central east is somewhat broken, and covered with poplar, spruce, tamarac, brulé and windfalls. This is on the slope of the Cypress Hills, at the bottom of which it is very marshy. There is here a body of good water, called Elk Water Lake. The south-east is level prairie, and is crossed by the Fort Walsh trail. Soil is of gravel formation, with sandy loam toward the north. Along the wooded portions the soil was in some places burnt off by bush fires. It is rated class 2 on Section 12 and the southern half of 1; class 3 on the two northern sections, and class 4 on Sections 13 and 24.—*J. G. Sing*, 1883.

Sub-division.—Very rough, and broken by the Cypress Hills. The mountain head, or summit, is situated on Section 9. The hills rise about 1,000 feet, and extend in a north-easterly direction across the township. The north slope is very rough, and cut up by deep ravines. The surface is densely covered with brulé, and windfalls and young pine, 2 to 3 inches through. On the moun-

tain plateau the surface is level prairie, with patches of pine, 7 to 12 inches through, and a rich black loam soil. From the foot of the hills, northward, the surface is hilly, with fine level tracts here and there, and a remarkably rich soil. Elk Water Lake, on Sections 23, 24 and 25, is a beautiful sheet of water, abounding in game and fish. On Section 25 a large steam saw mill is in operation. There are three other small lakes. The north of this township should settle up rapidly.—*J. F. Snow*, 1884.

9. *Outlines*.—This township is well adapted for farming. The soil is a fine clay loam. In parts, however, it is clay and gravel, and rates as low as classes 2 and 3. The numerous ponds furnish any amount of good water. The township is also conveniently situated for procuring wood from the Cypress Hills.—*J. G. Sing*, 1883.

Southwards it is rolling, with a good sandy loam soil and a fair supply of water.—*O. J. Klotz*, 1883.

Sub-division.—Rolling prairie, with a good clay loam soil on a clay subsoil, and generally class 2. Water may be found nearly everywhere. There is no growth of wood whatever. This is a fair township for agricultural purposes.—*F. Vincent*, 1883.

10. *Outlines*.—Soil, clay gravel or gravelly clay. Rated classes 1, 2 and 3 in various proportions on different sections. The township is fairly watered, and well adapted to farming. The surface is generally rolling, with heavy-rolling in the north-east. Ross Creek follows the course of the east line until it reaches the northern portion of Section 18, which it crosses several times. At this point there is considerable timber, and also in the southern portion of Section 31, where the creek again passes near the line.—*J. G. Sing*, 1883.

Sub-division.—Rolling prairie. Soil, sandy loam, with a grey clay subsoil. Class 2. There are some ravines and coulées in which wood, good for fuel, may be found. Water is scarce, but is abundant by digging for it.—*F. Vincent*, 1883.

Rolling and hilly. Soil, sandy loam—class 2—on clay subsoil; well watered, and producing an excellent crop of grass. The higher lands and ridges are gravelly and stony.—*C. E. Towle*, 1883.

11. *Outlines*.—The surface of this township is chiefly rolling prairie. Section 18 is traversed by a tortuous creek, and covered with small hills. A small creek also winds across Section 6. Ross Creek flows north within a mile west of the eastern boundary, and then bows twice across the boundary line in Section 36, after which it flows westwards in the direction of and close to the C.P.R. and the trail to Medicine Hat. In Section 25 there is a succession of stony hills and hollows, in which there are considerable indications of coal. There is some poplar, from 6 to 10 inches in diameter, along the banks of Ross Creek, in Sections 1, 12 and 13. The soil in the east is generally clay, and class 2, but in Sections 1, 25, and part of 36, it is gravelly, and classes 3 and 4. In the west the soil is generally clay, mostly class 1, but in the gravelly parts—which occur at intervals—classes 2 and 3.—*J. G. Sing*, 1883.

Sub-division.—This township is all rolling prairie. The soil is a good sandy loam on a sandy and grey clay subsoil, and class 2. The C.P.R. crosses the northern portion of the township. Wood, suitable for fuel, may be found in some of the ravines. Water is scarce, but may be obtained in Ross Creek which crosses the township—*F. Vincent, 1883.*

- 12. Outlines.**—The north-east is slightly hilly, but the balance of the north is rolling prairie. Soil, sandy loam and gravel. Ross Creek appears about two miles south, and running in a westerly direction.—*C. A. Magrath, 1882.*

Sections 7 and 18 are nearly all an alkaline flat, south of which the C.P.R. crosses, and through which a wide stream, called Ross Creek, flows in an easterly direction. The surface is generally rolling prairie. The soil is of excellent quality, consisting of a mixture of sandy and clay loam, rated class 1 everywhere, except at long intervals, where it is classed 1 to 2 and 1 to 3. But for the absence of wood and water, this country is admirably adapted to farming.—*J. G. Sing, 1883.*

Sub-division.—Rolling prairie. Soil, a good black clay and sandy loams, with black and sandy clay subsoils. Generally a good class 2. The C.P.R. crosses Sections 7, 8, 5 and 4. Water is scarce, and there is no wood.—*T. Vincent, 1883.*

- 13. Outlines.**—The north boundary passes through a valley from one-third to two-thirds of a mile wide, and 20 to 40 feet deep, with numerous ravines leading into it, most of which are on Section 32. Bordering on Section 36 is a lake of fresh water. Soil, 6 to 14 inches deep, on a clay subsoil. Is rated class 1 on the eastern half of Section 33 and the western portions of 31 and 34, and class 2 everywhere else, excepting the eastern portion of Section 36, where the soil is gravel. Class 3. No wood. West, rolling prairie, rising northward from Sections 6 to 19. In Section 30 the line crosses a valley 20 rods wide, and about midway on Section 31 it descends into another wider and deeper one. There is no wood or water on the line. The upper soil averages 8 inches deep, on a clay subsoil, and is rated class 2 everywhere, except in the valley on the northern half of Section 31, where it is class 1.—*J. A. Maddock, 1882.*

The east line is nearly all over rolling prairie, with a sandy loam soil. Class 2 in the south and 3 in the north. Very little water, except a lake on Section 36.—*P. R. A. Belanger, 1882.*

Sections 1 and 2 are not so hilly as the adjoining ones in in Range 2. Westwards from this point the surface bears a rolling appearance, and has a sandy loam and gravel soil.—*C. A. Magrath, 1882.*

Sub-division.—Level or rolling, except northwards, which is more hilly. Soil, sandy loam of very good quality—class 2—on clay subsoil. The supply of surface water is somewhat limited, although there is a lake in the western part, which is surrounded with excellent hay meadows, and in several parts of the township there are marshes. No wood.—*C. E. Towle, 1883.*

- 14. Outlines.**—Along the northern and western boundaries, principally rolling prairie. There are creeks in ravines on Sections 31 and 32, dry in September. No wood. Soil, chiefly 3 to 8 inches deep, on a clay subsoil, class 2, but on the greater part of Section 34 and the eastern portion of 36, it is gravel and rated class 3. The west is considerably broken on the three southern sections by hills and ravines, rising or falling from 20 to 40 feet.—*J. A. Maddock, 1882.*

Rolling prairie along the east line. Soil is generally sandy loam, with fair growth of grass. The hills are gravelly. Good water is scarce.—*P. R. A. Belanger, 1882.*

Sub-division.—The north-east half of this township is rolling prairie, of a sand loam soil, generally class 2, and without much surface water. The south-west half is more inclined to be slightly hilly or very heavily-rolling, and with a fair distribution of surface water. There are, in addition to small marshes, several lakes, one of which is on Section 1, and is fresh. A large lake—probably of 600 or 700 acres—and a smaller one closely north of it, submerge much of Sections 16 and 17. There is no wood.—*C. E. Towle, 1883.*

- 15. Outlines.**—There is a valley, which runs in a south-westerly direction in Section 36, after which the country northwards is rolling prairie, rising westwards until, in Section 32, the line descends into another narrow valley which extends into Section 31. This western section is very hilly and broken by numerous ravines, and at the end of it is a large shallow fresh-water lake averaging about one-quarter of a mile wide. From thence southwards the country is rolling prairie, rising steadily for a couple of miles, and afterwards sloping gently to the south. Alluvial soil over both lines is 2 to 8 inches in depth; subsoil, clay; class 2. No wood. The eastern boundary lies nearly all its length in a valley with a good sandy loam soil.—*J. A. Maddock, 1882.*

Sub-division.—Is almost divided into two portions by a slightly alkaline lake. The surface of the country is level and rolling, but in the vicinity of the lake is broken by hills and ridges. The soil is a sandy loam, averaging about class 2. It rests on a clay subsoil, and the township is a fair one for settlement.—*C. E. Towle, 1883.*

- 16. Outlines.**—Along the north the soil is sandy, and water almost totally wanting, the marshes being almost all dried up. The western part is a labyrinth of ravines running into the Saskatchewan. They are not wide, but very steep, and upwards of 400 feet deep. Their sides are sandy clay, in which huge sandstone blocks are imbedded. In one of these ravines was a thin seam of lignite.—*O. J. Klotz, 1882.*

The western boundary is broken and hilly. For nearly $2\frac{1}{2}$ miles, beginning at the north-west corner of the township, the line passes through a deep valley, with numerous ravines leading into it from the west. A shallow fresh-water lake, about one-third of a mile wide, extends northward through Sections 6 and 7. The line is also crossed by two creeks in Sections 18 and 19.

Soil: on Sections 30 and 31, sand; class 3; balance, 5 inches of alluvial soil on a subsoil of clay; class 2. The east is all rolling prairie, with heavy-rolling in the south-east.—*J. A. Maddock, 1882.*

Sub-division.—The valley of the Saskatchewan River extends into the north-west and north, rendering this portion hilly and broken. The soil is generally a sandy loam, class 2, but is dry, and is, in places—particularly on the ridges—mixed with gravel and stones.—*C. E. Towle, 1883.*

- 17. Outlines.**—Surveyed the northern and eastern boundaries of this township; also the western boundary of the tier of sections from 4 to 33. The whole township is either high-rolling or hilly. The western sections are very much broken by the Saskatchewan River. The soil consists of sandy loam on a sandy subsoil. In many parts there are, however, areas of gravel formation, such as in Sections 4, 9 and 21. In Sections 28 and 33 there is a portion in which the soil is alkaline, about 18 inches deep. On Section 12 the line crosses a valley 120 feet deep and about 14 chains wide, with a marshy creek at the bottom. The soil is poor for farming, and the grass is short. Water is very scarce, all the sloughs (and they are few and far between) being dry. The only wood found on the banks of the Saskatchewan River is driftwood. The banks are extremely high and precipitous, from 150 to 200 feet, and sometimes even 400 feet in height. The water is very difficult of access. The river here is about 200 yards wide, deep and rapid, with here and there large stones showing above the surface. West of the river the country becomes sandhills.—*H. C. Denny, 1882.*

The southern sections appeared to be rolling, dry and sandy. The south-west is much broken by deep ravines leading to the Saskatchewan River, which has rocky and precipitous banks, those on the south measuring 530 feet. A few trees and some drift wood were found on the edge of the stream, which is about 30 chains wide, and is very rapid.—*O. J. Klotz, 1882.*

Sub-division.—The South Saskatchewan River runs through the westerly tier of sections. It has very high banks, sandy and gravelly. The south-western part of the township is furrowed by extremely deep and precipitous coulées, one of them about 350 feet deep and almost impassible, and another 200 feet deep. The soil is a rich mixture of sand and clay, but back from the river it is dry. Some of the coulées have spring streams.—*J. I. Dufresne, 1882.*

- 18. Outlines.**—Hilly country, the hills being from 30 to 150 feet high. The soil is a light sandy loam poor for farming. Water is very scarce, even in the rainy season. The Saskatchewan River has banks which are extremely high and precipitous, and the river is very difficult of access. Its width is about 200 yards, deep and rapid, and its ravines break up the west of the township very much. Its course is northward through Sections 5, 8, 7, 18, 19, 30 and 31. There is no wood.—*H. C. Denny, 1882.*

Sub-division.—The Saskatchewan River crosses through the western tiers of sections, with the usual features, and high, inac-

cessible banks of 300 to 350 feet, broken by correspondingly deep ravines and gullies, which stretch into the country on either side of the river. The remainder of the township is an open, rolling prairie. Soil, a rich mixture of sand and clay, rather dry, but nevertheless should prove good for agricultural purposes.—*J. I. Dufresne*, 1883.

- 19. Outlines.**—Rolling prairie, with hills of drifting sand along the central and western sections. The soil towards the river is sandy loam. Class 3. No wood or water. The South Saskatchewan River enters this township a short distance east from the south-west corner, and flows in a north-easterly direction, breaking the surface very much. The banks are very steep and precipitous, deep coulées extending from the river for miles. The Middle Sand Hills occupy the entire north-west half. The east boundary is also rolling, broken and hilly. Soil, principally sand, or sandy loam; rated class 4.—*J. G. Sing*, 1883.

Sub-division.—The South Saskatchewan River enters in Section 6, and leaves in 13 and 24. Has a swift current, a depth of 4 to 8 feet, a width of about 800 feet, and banks 200 to 300 feet high, and very broken by numerous ravines for some distance inland. A seam of coal is bared near the water's edge, on the south bank of the river, in Section 9. The portion north of the river is sandy hills and alkaline flats, covered with willow and cherry scrub, and worthless as farming land. Portions of it, however, would do for grazing, being well supplied with water. South of the river is an undulating prairie, with a sandy loam soil. Class 2, suitable for agricultural purposes.—*J. McLatchie*, 1883.

- 20. Outlines.**—Towards the north the soil is 4th class, being sandhills in many places, with no signs of vegetation.—*T. Drummond*, 1882.

The Middle Sand Hills occupy the south-easterly two-thirds of this township; the balance is rolling prairie. The soil consists of a light sandy loam down to drifting sand. Mostly classes 3 and 4, but a few places are rated class 2. No wood or water on the east or west lines.—*J. G. Sing*, 1883.

Sub-division.—South-east and north-east, drifting sand, with rose willow and cherry scrub. The balance of the township is undulating and rolling prairie. Soil, sandy loam, classes 2 and 3, fairly adapted for agricultural purposes. There is a fair supply of fresh water in a spring creek on Section 3, and in several marshes.—*J. McLatchie*, 1883.

- 21. Outlines.**—Prairie, rolling in the east and slightly undulating in the west, with soil principally clay in the north-eastern sections, and alternating with sandy loam in the west, and entirely light sandy loam or sand in the south. Section 33 is considerably broken by coulées. No wood or water, speaking generally. The greater part of this township is of an inferior quality, consisting of rolling and hilly prairie, sandhills, and some alkali flats, with the exception of a strip along the north side, which is mostly undulating

prairie, with a sandy loam and clay subsoil. Fourth class.—*C. F. Miles*, 1882.

South, the surface consists almost entirely of sandhills, class 4, the only exception being Section 6, which has a black loam soil, 4 inches in depth, on a sandy subsoil. Class 3. No good water, and no wood.—*T. Drummond*, 1882.

Sub-division.—Very rolling and undulating; hilly and stony in places. Soil, light clay, or sandy loams or sand; generally poor for farming, but may answer for grazing. Several large marshes occur, some of which are alkaline.—*C. G. Sheppard*, 1883.

- 22.** *Outlines*—The northern line runs very diagonally across the Red Deer River and its valley, which embraces nearly all the line. The valley is unfit for anything more than grazing. There is some wood near the river.—*A. W. McVittie*, 1882.

The north half is adapted for little else than grazing, on account of its being greatly cut up by the banks of the Red Deer River. The banks are from 275 to 300 feet high in places, and often precipitous. The extreme south part of this township consists of good land, being rolling in the east and slightly undulating in the west, with soil principally clay on the two eastern sections, and sandy loam on the rest. Class 1, excepting the eastern half of Section 4, where the surface is considerably broken by coulées, and the soil rated class 3. No wood or water.—*C. F. Miles*, 1882.

Very undulating and rolling, broken by ravines running north and south. Soil, sandy loam generally, and class 2. Good for agricultural purposes. There is no wood.—*C. G. Sheppard*, 1883.

- 23.** *Outlines*—Rolling prairie, with a few sloughs (dry in August), and broken by coulées near the Red Deer River. Two of these coulées extend all the way across the township. Soil, heavy clay, except in the river valley, where it is either strong clay or sandy loam. Water is scarce, what there is being strongly alkaline. Red Deer River runs across the township, close to the south side. It is rapid, and has an average width of 25 chains, but in some places is over half a mile. The main channel is from 5 to 7 feet deep. Numerous shifting sand bars divide the stream into shallow channels. About two miles east of the west side there is a large valley about a mile and a-half wide, with numerous and large patches of cottonwood, running up to 30 inches in diameter.—*A. W. McVittie*, 1882.

Sub-division.—Is, in parts, gently-rolling, undulating and level; in others, highly undulating, hilly, stony and gravelly. The Red Deer River crosses the township in the south-west. This is an excellent township for settlement. No wood.—*C. G. Sheppard*, 1883.

- 24.** *Outlines*.—Along the north boundary it is generally very knolly and stony. Some small meadows are to be found. Soil is gravelly loam, from 4 to 10 inches deep. Subsoil, gravelly clay, hardened, and very little water.—*W. Ogilvie*, 1882.

Broken and hilly prairie, with surface gravel and field stone, and numerous sloughs. The soil is heavy clay. About the centre is a group of sandhills, with a few fresh-water springs.—*A. W. McVittie*, 1882.

Sub-division.—Very undulating and hilly in places. Soil, sandy loam, of classes 2 and 3, but generally very suitable for agricultural purposes, except where it is very broken by hills and ravines. The water in the marshes is generally fresh.—*C. G. Sheppard*, 1883.

- 25** *Outlines*.—Hilly prairie. Soil, mostly clay loam, 8 to 14 inches deep, on a clay subsoil; but on Sections 31 and 6 the soil is gravelly. It is rated class 2 on Sections 6, 25, 31, and the northern portions of 7 and 19. Eastwards, the surface is undulating. Soil: on the three southern sections clay loam, 18 inches deep, over clay; class 1. On the remaining portions, clay loam over clay, with one or two short intervals of sandy loam over sand. Rated class 1 on Section 24 and class 2 on 25 and 36. Water scarce.—*C. F. Miles*, 1883.

Southwards, the surface is of a knolly character. The soil is a gravelly loam, averaging 5 to 6 inches deep, on clay subsoil. There is not much surface water.—*W. Ogilvie*, 1882.

Sub-division.—The west is rather hilly, undulating and stony, of classes 3 and 4, whilst the remainder is more gently-undulating, with a soil of superior quality for agriculture. The west is more adapted for pasturage.—*C. G. Sheppard*, 1883.

- 26** *Outlines*.—The west is principally undulating prairie. Soil: on the three southern sections chiefly sandy loam, 6 to 12 inches deep, over sand; and on the remaining ones clay loam, averaging about 15 inches in depth, with clay subsoil. It is rated class 2 throughout. In Section 30 there is a large expanse of marsh. The east is rolling prairie. There is a small lake between Sections 25 and 36, and a small creek in Section 13. Soil, principally clay loam, averaging about 13 inches in depth, over clay subsoil. Class 2, excepting the adjoining semi-sections of 1 and 12, where it is gravel over clay.—*C. F. Miles*, 1883.

Sub-division.—In places undulating, hilly and gravelly. Soil, generally a sandy loam and a clay loam. Classes 1, 2 and 3. Water is abundant, and good hay marshes abound. An Edmonton trail crosses the north-east corner.—*C. G. Sheppard*, 1883.

- 27** *Outlines*.—The surface of this township is generally rolling prairie with a few hills on Section 36, and occasional high ridges elsewhere. Eastwards, the soil is generally a clay loam, about 12 inches deep, on a subsoil of clay, except on the adjoining portions of Sections 24 and 13, where it is a sandy loam over sand. The rating is generally class 2, but on Section 36 it is class 3. The western side of the township alternates in clay and sandy loam soils, and in places there are numerous ponds, some of which are of an alkaline nature.—*C. F. Miles*, 1883.

- 28** *Outlines*.—Very hilly and rolling prairie, abounding in small lakes and marshes. Soil, a good clay loam on clay subsoil, but, on account of the broken surface, class 2.—*T. Fawcett*, 1883.

East, rolling prairie. Section 36 is hilly, with knolls and a few sloughs. On Section 12 there is a piece of marsh, from which there emerges a watercourse. Soil, generally sandy loam or gravel, in alternate intervals, averaging about 10 inches deep, on subsoil of sand. Class 2. No wood. Generally the township is rolling prairie, with alkaline ponds and some ravines in the south-east half. Rates second and third class.—*C. F. Miles*, 1883.

The south is somewhat hilly. Ponds and marshes are numerous. The soil is good. On the hill tops scattered boulders are imbedded in the soil.—*T. Fawcett*, 1884.

29. *Outlines*—Is, in general, of a rolling character. A saline flat of considerable extent lies in the northern part. A number of saline lakelets are scattered over this flat. Good water is plentiful. No timber. The soil varies from a light to a very fair sand loam, with some clay loam. Classed 1 to 2, with some 3.—*F. W. Wilkins*, 1884.

30. *Outlines*.—Fully one-half of this township is occupied by the wide saline flat forming the valley of Sounding Creek. The rest of the township is rolling, except at the north-east, where it becomes hilly. Sounding Creek crosses from south-west to north-east, its course being first easterly, then almost due north. This stream is here about 10 feet in width, very shallow (with deep pools), and has a current of about 2 miles an hour. Its bed is exceedingly tortuous. Good water is in abundance. No timber, with the exception of a few bunches of small willows along the creek. The soil, except in the creek flat, is a very good, sand loam. Classed from 1 to 4.—*F. W. Wilkins*, 1884.

31. *Outlines*.—A large portion is occupied by the broad saline flat of Sounding Creek. The balance is, in general, rolling, but a good deal cut up by ravines draining into Sounding Creek. This stream is generally slow and deep, is about 20 feet wide, and has a soft, muddy bottom. Good water is plentiful throughout the rolling portion. No timber. The soil, except in the creek flat, is good, principally sand loam. Classed from 1 to 4.—*F. W. Wilkins*, 1884.

32. *Outlines*.—Along the north the country consists of both hilly and rolling prairie, with a few swamps and ponds in the north-west, and mostly poor soil.—*E. Bray*, 1883.

Is rolling, except in the north and east, where it becomes hilly. Stony tracts were met with. Several watercourses (almost dry at the time of survey) cross from west to east. Good water is reasonably plentiful. No timber. The soil is light in general, becoming pure sand at the north-east. Classed from 2 to 4.—*F. W. Wilkins*, 1884.

33. *Outlines*.—The greater portion is occupied by several shallow lakes of considerable size—expansions of Sounding Creek. The portion not covered by water is rolling at the north and hilly at the south. Good water is abundant. Even the water of the Sounding Creek Lakes may be used, though the creek itself is saline. No timber of any kind. The soil is generally very light and sandy. Classed from 2 to 4.—*F. W. Wilkins*, 1884.

34. Outlines.—The north-east half is rather hilly, and the south-west half is rolling. Sounding Creek (here a very small, slow and muddy stream) crosses the south-west angle, having a north-easterly course. A good sized saline lake lies in this township. Good water is plentiful. No timber. The soil is composed of all grades of sandy loam. Classed from 1 to 3.—*F. W. Wilkins*, 1884.

35. Outlines.—Is hilly at the east and north. Elsewhere it is rolling. Along the west side there are a good many ravines draining westward into Sounding Creek. Good water is plentiful. No timber. The soil is mostly a clay loam of excellent quality. Classed from 1 to 3.—*F. W. Wilkins*, 1884.

36. Outlines.—North, this line passes over numerous marshes, ponds and muskegs, especially toward the west. On Section 31 is an alkaline lake, a couple of branches from which extend northward across the line. Generally rolling prairie, with sandy soil. Class 3 everywhere, but on Section 36 class 2. There are a few places where the soil consists of clay. There is no wood on the line, but on Section 35 some poplar bush lies within sight of it.—*T. Kains*, 1883.

The north two-thirds is rolling, and the south one-third is very hilly, and a good deal cut up by deep ravines draining north-westerly into Sounding Lake, which enters this township at the extreme north-west angle. Considerable poplar wood, some of good size, and in good sized bluffs, may be found in the northern part, and some large poplars grow in the deep ravines at the south. Good water is reasonably abundant. The soil at the north is almost pure sand, changing at the south to a sand loam of good quality. Classed from 2 to 4.—*F. W. Wilkins*, 1884.

37 Outlines.—As it appeared from the line, the southern part is generally gently-rolling prairie, with occasional grass swamps and lakelets. The soil is sandy, and rates second and third class.—*T. Kains*, 1883.

The north-easterly end of Sounding Lake extends one and a-half miles into the south-west corner. The land in this part ascends from the lake in broken ridges and hills to the north, to a height of from 80 to 100 feet and is covered with a large area of small poplar brush, a few of the trees being 8 inches in diameter. Poplar is also scattered over the west half of the township. The soil in this part is sandy, and classed from 3 to 5. Good grass abounds in the hollows. The easterly half is high, open and rolling, or hilly prairie; the soil being loam or sandy loam. Classes 1 to 3. Eye Hill Creek flows easterly through the southerly part of the township, being the outlet of Sounding Lake.—*J. F. Garden*, 1884.

38. Outlines.—With the exception of a small quantity of poplar in the south and south-west parts, is entirely open prairie. A valley or depression, containing large ponds and sloughs, is crossed by the western boundary in Section 18, and extends east and south-east. Good grazing may be found in it, vetches being abundant. The remainder of the township is rolling. The soil is either loam or sandy loam. Classes 2 to 3.—*J. F. Garden*, 1884.

39. Outlines.—The west part is high and rolling. The south, east and north portions are gently-rolling or undulating. No bush of any consequence was observed. Two or three miles of a long, narrow lake, extending northerly, lies in the north-west part. Numerous ponds and sloughs in the south-east and north-west portion, all containing fairly good water. The soil changes from loam in the north to loam and sandy loam in the south, and classes 1 to 2.—*J. F. Garden, 1884.*

40. Outlines.—North, the surface is principally undulating or rolling. On Section 34 the line passes along the bottom of a valley about a mile wide, extending east and west. There is no wood and not much water along the line. The soil is principally black loam, averaging about 5 inches in depth, with sandy subsoil, class 1 throughout.—*C. A. Magrath, 1883.*

The continuation of the lake mentioned in Township 39 extends from Section 5 in a north easterly direction about three miles, having an average width of about 30 chains. The surface is open and rolling, with numerous sloughs, containing good, permanent water. The soil changes from clay to sandy loam and gravel, and is classed from 1 to 3, the lighter description being in the north and north-west parts.—*J. F. Garden, 1884.*

41. Outlines.—The whole of this township is open land, with the exception of a small quantity of poplar and willow on the north boundary. The surface in the south-east parts is rolling, with a sandy loam soil and some scattered stones. Classes 1 to 2. But few sloughs occur. A small creek, running northerly, enters in Section 7 and leaves the township in Section 32, bordered, in some parts of its course, by low, marshy land. The westerly part of the township is high and rolling, or hilly, with scattered stone, gravel, and sloughs in the hollows. A range of hills extending southerly crosses Section 33, along the west base of which the creek above mentioned runs. The soil is generally sandy loam or sand, and rates classes 1 to 3 —*J. F. Garden, 1884.*

South, some small ravines run northward. Granite boulders crop out from the hillsides. Soil, first class.—*C. A. Magrath, 1883.*

42. Outlines.—The creek mentioned in Township 41 enters this township in Section 5—running north-easterly—and leaves it in Section 35, where the channel is 15 feet wide, water 2 feet deep, sandy bottom, rapid current and good water. The surface is open and hilly or rolling, along the southern boundary. The soil is loam or sand, classed 1 to 3. The rest is undulating or rolling, with sand ridges or knolls and small scrub poplar; also muskegs and ponds in the northerly part. The soil here changes from sandy loam to sand, and is classed from 2 to 4.—*J. F. Garden, 1884.*

43. Outlines.—Has a rolling surface, broken, in the greater part, by low sand ridges covered with small poplar, much of it scrubby, with willows in the hollows and ground cedar on the knolls. In the north-east corner a small tract of good land, with sandy loam soil was noted. Classed 1 to 2. The remainder of the township is sandy and broken, classed 3 to 4. Ribstone Creek enters on

Section 19, crosses it in an easterly direction, is bordered by a muskeg with willows, and leaves it in Section 12.—*J. F. Garden, 1884.*

- 44. Outlines.**—North, hilly country, with bluffs of poplar and patches of willow covering nearly half of the surface. Ponds are numerous in the west. The soil is principally clay loam, 3 to 6 inches deep, over clay. Class 1.—*T. Kains, 1882.*

Has, generally, a rolling or undulating surface, except in the north-west corner, where it is high, broken by short ridges, and a ridge 70 feet high in Sections 2 and 3. Poplar—much of it dead—and willows are widely scattered over it. There are many ponds and sloughs, with good grazing land about them. The soil is principally a good loam, classed 1 to 2. Some sandy soil extends across the southern parts, classed 3 to 4.—*J. F. Garden, 1884.*

- 45. Outlines.**—Is generally rolling, with the exception of the south-west quarter, which is hilly and knolly. It is interspersed with bluffs of young poplar and willows, generally suitable for all purposes. The soil is either clay or clay loam, of a first class quality. Battle River runs through the north-east quarter, in Sections 25, 26, 33 and 34. It is generally 4 feet deep, with a sandy bottom, and a two to three mile current.—*P. R. A. Belanger, 1884.*

The country along the southern boundary is dotted with numerous poplar bluffs and some ponds and swamps. The soil is of a first class quality.—*T. Kains, 1882.*

- 46. Outlines.**—The south-west half is hilly, and broken by Battle River and its deep adjoining ravines. Clumps of fair sized poplar appear all along the river banks. Good water is in abundance in deep ponds and lakelets. The soil is either black loam or clay loam, with clay subsoil, and ranks first class.—*P. R. A. Belanger, 1884.*

- 47.** Is generally rolling and open in the north half, but is somewhat hilly, and interspersed with numerous bluffs of small poplar, dry wood and willows in the south half. The soil is a rich sandy loam, with clay subsoil, watered by numerous ponds and a small creek which crosses through the west boundary and empties into Battle River.—*P. R. A. Belanger, 1884.*

- 48.** North, the surface is alternately high-rolling and hilly prairie with black loam soil, averaging about 10 inches in depth, on a subsoil of clay loam. Class 1. A large lake extends throughout Section 31 and the western half of 32, about half a mile south of the line. There is also a large pond between Sections 33 and 34. No wood.—*T. Kains, 1882.*

Is rolling prairie, with a first-class soil. Numerous large lakes are met with on the west boundary. The telegraph line and Battleford-Edmonton trail cross through the south half.—*P. R. A. Belanger, 1884.*

- 49. Outlines.**—As it appeared from the west boundary, this township is rather hilly or heavy-rolling, with numerous ponds and lakelets in its centre. A prominent hill—forming part of Blackfoot Hills—appears in Sections 6 and 7, and another one in the south-east

quarter. Bluffs of poplar and willows are abundant, principally in the south-west half. The soil is ranked first class.—*P. R. A. Belanger, 1884.*

49. Outlines.—In the neighborhood of the southern boundary the country becomes high and hilly prairie. There are numerous ponds, swamps and, in some instances, small lakes, amongst these hills. There is also a considerable growth of small poplar and willows in the vicinity of these. The soil is a black vegetable mould, and of a first-class quality.—*T. Kains, 1882.*

50. Outlines.—Is heavy-rolling or hilly prairie, as may be judged from the west boundary. The soil is a first class clay or clay loam, with clay subsoil. A small border of willows appears around ponds here and there.—*P. R. A. Belanger, 1884.*

52. Outlines.—The north boundary crosses creeks in every Section, except 33, where a marsh is crossed. The Vermillion River flows north, through the township, emerging from it on Sections 31 and 32. Here there is a little timber, and very small, and in other parts of the line there are scattered clumps. The valley is 100 to 115 feet below the country on either side. The land is of an excellent character in this range, and the water almost universally fresh.—*W. A. Ashe, 1882.*

Sub-division.—Rolling land and brushy prairie, dotted with bluffs of small poplar and willows and interspersed with small willow marshes. A few balm of Gilead, of 12 or 14 inches—suitable for building-logs—may be found in some of the bluffs, and the smaller woods of these bluffs will furnish ample supplies of fuel and fencing. The soil is good clay loam—in a few places slightly mixed with sand—on a clay subsoil, and yields a luxuriant growth of grass. The supply of surface water is very good, and of excellent quality. The Vermillion River flows through Sections 5, 17, 16, 21, 28, 29 and 31, and receives, in its course, many small creeks and springs. The township is considerably cut up with ravines and gullies, but notwithstanding these objections, is very favorable for settlement, owing to its fine soil and good supplies of water and wood.—*J. Doupe, 1883.*

53. Outlines.—The land in the vicinity of and along the southern boundary is excellent, and first class for farming. A number of creeks, which are tributary to the Vermillion River, cross the southern tier of sections, flowing south.—*W. A. Ashe, 1882.*

Sub-division.—Rolling land; mixed prairie and bluffs of poplar and willow, with a good many wet willow marshes. The soil is an excellent clay loam on a clay subsoil, yielding a luxuriant growth of grass. The Vermillion River enters Section 5, and pursuing a very tortuous course in a valley half a mile wide and about 100 feet deep, leaves the township near the north centre of Section 32. In its course it passes over Sections 6, 5, 4, 8, 9, 17, 18, 19, 30, 31 and 32. In the early spring this stream overflows the banks; but soon reduces to 60 or 70 feet broad and 10 feet deep in mid-channel, and in July to half these dimensions, revealing numerous rapids. By August it becomes a very insignificant stream. The water is fresh both in this

stream and in the creeks and marshes of the township. The timber is chiefly small poplar, but limited in quantity. A very good township for settlement.—*J. Doupe*, 1883.

- 54. Outlines.**—The Saskatchewan River enters at or about Section 33 and flows in a southerly direction for a distance of about four miles; it then bends to the north-east, and leaves in Section 13. Vermillion River enters in Section 4, and runs north-easterly to the Saskatchewan River, making the junction about Section 15. Along these rivers the land is more or less broken by high banks. East of the Saskatchewan and Vermillion Rivers the country is a mixture of rolling prairie, poplar bluffs and scrubby land; while to the west of these rivers it is gently-rolling, and appears to be almost all covered with scrub and bluffs of small poplar. Some light sandy land was found along the south boundary, but generally the soil will average second class.—*E. Bray*, 1884.
- 55. Outlines.**—The easterly part is rough or hilly, broken by numerous small lakes or ponds, and is covered with bluffs of small poplar and scrub. The central sections are mostly composed of partly open, rolling land; while those to the west are rolling, but have considerable tracts of woods of small poplar and scrub. The Saskatchewan River flows south-easterly through Sections 18, 8, 5 and 4, and Frog Creek runs southerly through Section 31 to Section 18, where it joins the Saskatchewan. The soil will probably average second class.—*E. Bray*, 1884.
- 56. Outlines.**—Is composed of open land, alternating with comparatively extensive tracts covered with woods of small poplar and scrub. The land is generally rolling, and the soil about second class. Frog Lake lies partly in the north-easterly corner, and its outlet, Frog Creek, runs south-westerly, crossing the south boundary at Section 6. The greater part of this township is covered by the Frog Lake Indian Reserve.—*E. Bray*, 1884.

The north boundary is thickly timbered with poplar and scrub, and with patches of spruce in places. The timber is small, and of little value. The land is poor, very rough and broken, and cut up by ponds, muskegs, &c.—*G. B. Abrey*, 1882.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE IV.

5. *Outlines*.—Very broken country, greatly cut up by a network of coulées. The soil westwards is a grey granular clay, on a hard clay subsoil, and almost destitute of vegetation. Towards the east the soil is sand and gravel on a clay and gravel subsoil.—*C. E. Wolff*, 1883.

The country along the south boundary consists of broken prairie, with a peculiar clay soil and an abundant growth of cactus. It is the climax of bad lands. There is a creek on Section 1 and another on Section 4, both of which flow south. No wood.—*O. J. Klotz*, 1883.

6. *Outlines*.—Broken and hilly, with numerous coulées in the east and south, and undulating in the north-west. The soil westwards is a sandy clay loam over a clay subsoil, and eastwards it is sand and gravel on clay and gravel.—*C. E. Wolff*, 1883.

7. *Outlines*.—Rough and broken, hilly and stony. Sandy and gravelly loam soils. Classes 3 and 4. A small creek crosses the west line several times in Sections 31 and 30. On the latter section there is a trail. The vicinity of Medicine Lodge Coulée and Bad Buttes, in Sections 24 and 25, is heavily timbered with spruce, poplar and hazel. Water is not difficult to obtain.—*J. G. Sing*, 1883.

8. *Outlines*.—The north boundary is rather hilly, with numerous fresh-water ponds. In the valleys the soil and vegetation is good. The knolls are stony.—*O. J. Klotz*, 1883.

For the northerly two thirds of the west boundary the surface is rough, broken, hilly and stony, with sandy loam soil. Class 3 on the first two miles, and gravelly soil, class 4, on the rest. The remaining one-third on the south is rolling prairie, with gravelly soil; class 3. On the east boundary the surface is hilly and stony. Soil, gravelly or sandy loam, principally class 4. In Sections 1, 6, 30 and 36 are creeks running from the hills. Some timber on the south-east portion of Section 12. Some fine meadow land on Section 1.—*J. G. Sing*, 1883.

Sub-division.—Is very hilly, with numerous fresh-water ponds. The foot hills of Cypress Mountain extend across the southern portion, rendering it very rough, and broken by deep ravines. The soil is a good clay loam in the valleys, with stones on the hill tops. This township has abundance of grass and water, and is more suitable for grazing than agriculture. There is some wood, good only for fuel, on Sections 1, 2, 10 and 11.—*J. F. Snow*, 1884.

9. *Outlines*.—This township is all rolling prairie, well watered with numerous ponds and small lakes. The soil is clay, gravel and gravelly clay, alternating, and grades in classes 2, 3 and 4 in the

west, and in the east in class 3, which greatly predominates.—*J. G. Sing*, 1883.

The south is rather hilly, with numerous fresh-water ponds. In the valleys the soil and vegetation is good.—*O. J. Klotz*, 1883.

Sub-division.—Hilly. Soil, a good black clay loam and a good sandy loam, with subsoils of black and sandy clay. Class 2 generally. There is a fair supply of surface water throughout in marshes and small ponds. A good township for settlement. No wood.—*J. F. Snow*, 1884.

- 10. Outlines**.—Chiefly rolling prairie, with clay, gravel or gravelly clay soil. Classes 1, 2, and some 3. Along the eastern boundary, the first of these soils occur on Section 36, class 1; 24, classes 1 and 2, and 13, where there is excellent grass, classes 1, 2 and 3. The second, partially on Section 25, which is classes, 1 and 2, and the gravelly clay on Sections 1 and 12, where it is rated chiefly class 2. The township is fairly suited for farming. On the west, Section 6 is hilly, and a creek wanders along 19.—*J. G. Sing*, 1883.

Sub-division.—This township is rolling prairie. The soil is composed of sandy and clay loams on sandy clay and black clay subsoils, and will rate nearly all class 2. Water throughout is very scarce, and there is no wood. A couple of coulées, with spring creeks only, furrow the township in a northerly and southerly direction.—*F. Vincent*, 1883.

- 11. Outlines**.—The surface is rolling prairie. The soil is of good quality, consisting of sandy loam, clay, sand and clay or sand and gravel. It is rated chiefly class 1, with some second and third class land along the west, central and southern sections. Sections 6 and 7 are a little stony, and the surface is very broken along Section 13, which is traversed by a large creek. Another creek winds its way across Section 1.—*J. G. Sing*, 1883.

Sub-division.—Rolling prairie, broken by several dry creeks. Soil, clay loam, class 2, on clay subsoil. Water scarce.—*C. C. DuBerger*, 1883.

- 12. Outlines**.—Along the north boundary rolling prairie, with a sandy loam soils, sometimes mixed with gravel.—*C. A. Magrath*, 1882.

West, rolling prairie, broken by a couple of deep coulées, and, in Section 19, by the valley of Ross Creek, which stream flows in a north-westerly direction. The soil is sandy loam in the northern, and clay loam in the central and southern sections. Classes 1, 2 and 3, the best land being on the southern and the poorest on the middle sections. The line is crossed in Section 7 by the C.P.R., and in 30 by a trail. At the east, Sections 12 and 13 lie in an alkaline flat. The former section is crossed by the C.P.R. and the latter by Ross Creek, near which there is a trail. The soil is chiefly clay loam, about 3 inches in depth, on a clay subsoil, chiefly rated class 1, with some second class land occurring at intervals. There is no wood.—*J. G. Sing*, 1883.

Sub-division.—Generally rolling prairie, except the western part, which is very broken. The C.P.R. crosses this township, and Dunmore Station is located here. South of the track the land rises 80 feet, and continues southwards to be rolling. The soils

are a clay loam and a red clay and gravel. Classes 1 and 2. There is abundance of fresh water.—*C. C. DuBerger*, 1883.

- 13** *Outlines*.—Along the north boundary, going west, the first mile passes through a shallow valley about two-thirds of a mile wide. The second mile crosses a dry slough, two-thirds of a mile long, after which the surface is rolling prairie. Soil: on the three eastern sections, from 8 to 14 inches on clay; class 1 in Section 36, and class 2 to the middle of Section 33. On the remaining two and a-half miles the soil is rated class 3, consisting of gravel on the adjoining portions of Sections 33 and 32, and from thence to the end of the line, sand. There is no wood or water. East, rolling prairie, with rising inclination to the north on the southerly two-thirds. The upper soil is generally class 2, and overlies a clay subsoil. In the north-east it is class 1.—*J. A. Maddock*, 1882.

Along the western boundary, going north, the first two sections are undulating prairie, with a clayey loam soil. Then the surface rises to the north, and in the last section there are sand-hills. Along the southern boundary it is a rolling prairie, with a sandy loam soil, sometimes mixed with gravel.—*C. A. Magrath*, 1882.

Sub-division.—Beautifully rolling and undulating, with low hills of gentle slope, and well adapted for tillage. Soil, a rich, brown, sandy loam, of moderate depth. The sloughs and marshes dry up as the summer advances. No bush or trees are to be seen. The grass is short, but nutritious, and horses and cattle were pastured thereon all last winter—1882–83. The north-west corner of the township is very sandy in beds and knolls. The township is an excellent one, and under a favorable rainfall will produce fine crops.—*T. Brownjohn*, 1883.

- 14** *Outlines*.—Along the north and east boundaries the surface is chiefly rolling. In the south-east, however, there are hilly or heavy undulations of from 20 to 50 feet. No wood or water. Soil, generally, 6 to 12 inches, alluvial, on a clay subsoil, and is rated class 2. An approximate description of the south of this township is given in the north of Township 13.—*J. A. Maddock*, 1882.

Along the western boundary, Section 6 is rolling prairie, with a very good soil. The remaining five sections, going northwards, contain coulées, from 50 to 100 feet deep, running into the South Saskatchewan River, which is from $1\frac{1}{2}$ to 4 miles west of the boundary, and running in a northerly direction.—*C. A. Magrath*, 1882.

Sub-division.—All open prairie, without timber, wood or even brush, and at the time of survey (October) no water, except one slough. The surface of the country is rolling; the hills are high, but the slopes are very gradual. The soil is generally mixed with coarse sand or fine gravel, and in places numerous boulders dot the surface. The herbage is scant and short, but much relished by horses and cattle, and it appears to be better adapted for grazing purposes.—*T. Brownjohn*, 1883.

- 15** *Outlines*.—The north is all rolling prairie, with heavy-rolling at the extreme ends and sandy loam soil to the west. The north-eastern corner falls in a long, shallow, fresh-water lake, averaging about

one-quarter of a mile wide. Southward from thence the country is rolling prairie, rising steadily for a couple of miles, and afterwards sloping gently to the south. Alluvial soil, 2 to 8 inches in depth; subsoil, clay. Class 2. No wood.—*J. A. Maddock*, 1883.

On the west boundary it is sandy soil, with some dry marshes, until the southern part is reached, where it becomes pure drifting sand.—*O. J. Klotz*, 1882.

Sub-division.—This township is level and gently-rolling prairie, with numerous dry hay marshes, and having a sandy loam soil of classes 1 and 2, well adapted for agriculture—particularly for growing oats. Water is scarce; only one small lake occurs, and that in the north-east corner, the water of which is fresh.—*A. Bourgeault*, 1883.

- 16. Outlines**.—Along the western limit the country is hilly and the soil stony and sandy, while on the north the soil throughout is sandy and dry. There are a few ravines. Water in this township is very scarce.—*O. J. Klotz*, 1882.

Along the eastern boundary the country is broken and hilly. For nearly $2\frac{1}{2}$ miles, beginning at the north-west corner, the line passes through a deep valley, with numerous ravines leading into it; then two creeks are crossed in Sections 24 and 13. A shallow fresh-water lake, about one-third of a mile wide, extends northwards through Section 1 and east of 12. Soil, on Sections 25 and 36, sand; class 3. On the four remaining ones, 5 inches, alluvium, on a subsoil of clay; class 2. There is no wood. The south is all rolling west of Section 1.—*J. A. Maddock*, 1882.

Sub-division.—Undulating and rolling prairie, except in the east and north-east, which are very broken. Soil, in the first part, is sandy loam, of 6 inches deep, class 2, and on the hilly portions gravel and sand, with stones. Water becomes scarce as the season advances, when only a few marshes remain, and a fresh-water creek in Sections 24 and 25.—*A. Bourgeault*, 1883.

- 17. Outlines**.—Is composed of hilly country, the hills being from 30 to 150 feet high, with stones and boulders on their summits. The soil is light sandy loam, not fit for farming, and the grass is short and poor. Water is very scarce, all the sloughs (and they are few and far between) being dry, their appearance indicating very little water, even in the rainy season. The only wood is drift, found on the banks of the Saskatchewan River. The banks are extremely high and precipitous, from 150 to 300 feet. The water is very difficult of access, about 200 yards wide, deep and rapid.—*H. C. Denny*, 1882.

Southwards, soil throughout is sandy and dry. There are a few ravines. Water in this range is very scarce. On the west boundary there are sandhills, with abundance of cactus. On Sections 19 and 30 the river is crossed. The banks here are not very high nor steep. The soil is sandy.—*O. J. Klotz*, 1882.

Sub-division.—The South Saskatchewan River divides this township into about two equal parts, taking a crookedly diagonal course across from Section 30 to 12. The river is not conveniently accessible anywhere, owing to the high and precipitous banks,

which are 300 to 350 feet high, and intersected and broken by gullies and ravines for nearly a mile inland. The remainder of the township is sandy or sandy clay soils, and dry. Only some patches here and there good for settlement.—*J. I. Dufresne*, 1883.

- 18. Outlines.**—Along the west boundary the soil, generally, is of a sandy nature, and poor for agriculture. The northern part consists of a large alkaline flat, so much so that the ponds therein are bordered with an efflorescence as white as snow.—*O. J. Klotz*, 1882.

Is composed of low, hilly country. The soil is light sandy loam, and not fit for farming purposes. The grass is short and poor. There is no wood, and very little water remains on the surface, even in a rainy season.—*H. C. Denny*, 1882.

Sub-division.—Very dry, sandy and broken surface. The best part of the township is Sections 5, 6, 7, 8, 30, 31 and 19, where the soil is a mixture of sand and clay. Wood is to be had along the Saskatchewan, a few miles off, but none in the township. *J. I. Dufresne*, 1883.

- 19. Outlines.**—Section 18, northwards, is prairie, with high-rolling hills, but southwards there is a descent into a deep valley, which extends through the township in a south-easterly direction. At the foot of the descent is a level flat, in which is a large alkaline lake, which extends southward for two miles, south of which the country is rolling prairie. The soil is sandy, but on Section 31 it consists of a couple of inches of clay loam, over gravel. There is also a subsoil of gravel on Sections 30 and 18. It is rated class 4 throughout. No wood.—*T. Drummond*, 1882.

The east is rolling prairie, with hills of drifting sand along the central sections. On Sections 1 and 12, sandy loam, class 3, and the remainder of the line sand, class 4. No wood or water.—*J. G. Sing*, 1883.

Sub-division.—A large alkaline clay valley crosses the township from Section 6 to 33 and 34, containing a lake and several ponds. Near the correction line there are some high gravelly ridges, with intervening ponds and good pasturage. The rest of the township is divided between drifting sandhills, partially covered with clumps of rose, cherry and other scrub, and rolling prairie, with a soil of sandy and clay loams. Class 3.—*J. McLatchie*, 1883.

- 20. Outlines.**—The north and west consists of prairie, with high-rolling hills. The soil along the northern sections is black loam, 3 to 18 inches deep, with generally sandy subsoil, excepting Section 31, where it is yellow clay. It is rated class 3 on Section 36 and class 2 on all the rest. On the western sections it is chiefly gravelly, but on the southern portions of 19 and 6 it is clay, and on the northern portions of the two latter, sandy. Class 2 on the three southern sections and class 3 on the rest.—*T. Drummond*, 1882.

Eastwards, the surface is rolling prairie, with sandy loam soil, rated class 3 everywhere, except on Section 36, where it is class 2. No wood or water. Westwards, the land is very poor, while to

the north it is rather good, the soil ranking class 2.—*J. G. Sing* 1883

Sub-division—Rather broken—especially southwards. On Sections 3 and 4 there is a large alkaline lake, surrounded by hills from 200 to 250 feet high, and fed from springs in these hills. The northern portion is less broken, and has a good soil of clay loam, but, owing to the broken surface, will be difficult to cultivate. It will answer, however, well for grazing.—*J. McLatchie*, 1883.

- 21. Outlines.**—The north boundary has a sandy loam soil, 12 to 18 inches deep, on a clay subsoil, and is class 1 in the eastern half. The western half, however, being broken by coulées running northward into the Red Deer River, is rated class 4, excepting the eastern portions of Sections 33 and 32, where it is again class 1. No wood. The east is prairie, rolling on the southern and central, and undulating on the northern sections, the soil being generally sandy, with an occasional admixture of clay or gravel. Class 2, excepting for two miles north from the middle of Section 12, where the soil is class 3, and has numerous knolls covered with boulders. No wood or water.—*C. F. Miles*, 1882.

West and south, the surface consists chiefly of prairie, with high-rolling hills. Soil, black loam, 4 inches deep, over clay subsoil, excepting Section 31, where it is sandy and stony, with subsoil of gravel. It is rated class 1 on Sections 7, 18 and 19, class 3 on Section 1 and class 2 on all the rest. No wood or water.—*T. Drummond*, 1882.

Sub-division.—Sections 8, 17, 18, 19 and 20 are hilly prairie, 25, 26, 27, 34, 35 and 36 are level, and the remainder of the township is rolling, except 32, which is rough and much broken by ravines from the river valley. The soil is a sandy loam—class 2—on a sand and gravel subsoil. South-eastwards there are several ridges of drifting sand. No wood; but plenty can be got from the adjoining Township, No 22. Water is very scarce, and the township, on this account, is classed down to between 2 and 3.—*J. S. O'Dwyer*, 1883.

- 22. Outlines.**—The north is heavy-rolling and hilly, being very rough near the north-east corner, where it is broken by the Red Deer River. The soil is a heavy clay, and there are quantities of field stones in places. The banks of the river are high and precipitous.—*4. W. McVittie*, 1882.

The Red Deer River, flowing east, crosses Section 6, It is shallow, and full of sand bars, with banks 150 feet high. North of this the surface is generally rolling prairie, rising toward the north on Section 7, and much broken by gullies on 18. The soil is chiefly sand and clay in the south and stone and gravel in the north, all rated class 4. No wood anywhere along the line.—*T. Drummond*, 1882.

The Red Deer River, running nearly diagonally across this township from south-west to north-east, crosses the west boundary in Section 6. At this place the banks are 150 feet high. There appears to be timber all along this river, except where there are cut banks on both sides, but it is a narrow belt, and does not

amount to much. The timber consists principally of cottonwood and poplar. The land is poor, and ranks as 3rd and 4th class. Only a small portion of the township would be available for agricultural purposes, though probably adapted for grazing. The south-east quarter consists of some very fair land.—*C. F. Miles*, 1882.

Sub-division.—Exceedingly rough, due to the precipitous banks and connecting ravines and gullies attending the course of the Red Deer River, which runs almost diagonally through the township south-west to north-east. The banks are 100 to 200 feet high. With the exception of isolated tracks, whole sections—1, 2, 3, 4, 10, 11, 12 and 22—are the only portions adapted for agricultural purposes, and also portions of Sections 7, 8, 33, 34, 21, 27 and 28, which are rolling or flat. The soil is generally a sandy loam—class 2—on a sand or gravel subsoil. Timber is to be had along the banks of the river, and beyond the river water is scarce. The river is narrow, and probably about an average depth of 5 or 6 feet; current about three miles, and would be navigable for steamers having as much as 3 feet draft.—*J. S. O'Dwyer*, 1883.

- 23.** *Outlines.*—Surveyed north, east and south, and find this township is broken and hilly, with surface gravel and field stone, and numerous sloughs. The soil is a heavy clay. At the large bend near the east side the banks are very rough, with a precipitous bank a short distance back from the river, about 300 feet high, where outcrops of sandstone protrude, consisting of a friable grey and hard sandstone, with an overcrust of about 50 feet of gravel and clay.—*A. W. McVittie*, 1882.

Westwards, very rough and stony; poor, gravelly soil, from 6 to 15 inches deep; subsoil generally gravel. The southern half of this township is occupied by the valley of a creek which, where the line crosses, was dry, with the exception of a few water holes. The water was strongly alkaline.—*W. Ogilvie*, 1882.

Sub-division.—Rolling prairie, except Sections 28 and 33, which are hilly, and that portion—the south-eastern corner—traversed by the Red Deer River, which embraces Sections 1, 2, 11, 12, 13 and 14, all exceedingly broken by the banks, bluffs and ravines contiguous to and extending from the river. Wood was found along the river, and in Section 14, but not in great quantity. Soil is a sandy loam, and classed between 2 and 3, owing to limited supply of surface water.—*J. S. O'Dwyer*, 1883.

- 24** *Outlines.*—Northwards, the country is generally very knolly and stony. There are some small meadows. The soil is a gravelly loam, from 4 to 10 inches deep, on a subsoil of gravelly hardened clay. Very little water. Along the west boundary the surface is rolling, with a light clayey loam soil, from 8 to 16 inches deep, on a hard subsoil of clay and sand.—*W. Ogilvie*, 1882.

Broken and hilly southwards, and rolling, heavily-rolling, and, in parts, hilly, eastwards. The soil is chiefly a sandy loam. There are numbers of small dry sloughs—*A. W. McVittie*, 1883.

Sub-division.—Hilly prairie. Soil, a sandy loam, of 8 inches, class 2, on a subsoil of gravel, and stony in many places. Many small lakes and sloughs were met with, and one lake of 35 acres,

all of which contain fresh water. This township is suitable for grazing, having fine grass, excellent water and plenty of shelter. A good cart trail crosses the township diagonally to the Saskatchewan.—*J. S. O'Dwyer*, 1883.

- 25. Outlines.**—Sections 6 and 18 rolling; 7 hilly, and the remainder of the west, undulating. There are several watercourses along the line, but they were all dry at the time of survey (31st July). The east is hilly. Throughout the township the soil is clay loam, averaging about 10 inches in depth, with clay subsoil, rated class 2 on Sections 6, 19, 30, 1, 25 and the northern halves of 18, 12 and 24, and class 3 on the rest. Eastwards, there is no water, excepting a large pond in a deep ravine on Section 13, and another in the south of Section 1.—*C. F. Miles*, 1883.

Along the south boundary the surface, generally, is very knolly and stony. There are some small meadows. Soil is gravelly loam, from 4 to 10 inches deep; subsoil, gravelly clay, hardened. Very little water.—*W. Ogilvie*, 1882.

Sub-division.—The first two tiers of easterly sections are hilly. To the west of these the remainder is rolling prairie. Sections 9, 10 and 16 are broken by a large fresh-water lake, and 32 and 34 by marshes. The soil is a hard sandy loam, of 8 or 9 inches, class 2, on subsoil of clay and gravel. There is plenty of surface fresh water. The east is adapted for grazing, the west for agriculture. The soil, though hard, is good, and would only require some breaking up to produce well.—*J. S. O'Dwyer*, 1883.

- 26. Outlines.**—West and east, surface principally rolling prairie, with a few ravines and hills towards the south. There are a number of marshes and reedy ponds in the valleys or ravines on Sections 18 and 19, but, on the whole, water is rather scarce. Soil, clay loam, averaging 14 inches in depth, on a clay subsoil, excepting on the three south-easterly sections, which are sandy loam, 6 to 12 inches deep, with sandy subsoil. It is rated class 2 throughout. In the north of Section 25 there is a large expanse of marsh, about seven-eighths of which is east of the line. There is a creek leading out from it towards the west, which was dry at the time of survey (4th August).—*C. F. Miles*, 1883.

Sub-division.—The west half of this township is rolling prairie. A small portion of the north-east is undulating, and a few sections at the south-east corner are hilly. Soil, hard sandy loam, class 2, similar to Township 25. Water plentiful and fresh. There are three lakes, aggregating 160 acres, and many small marshes. Sections 9, 10, 15, 16, 35 and 36 are broken by lakes, and on Section 3 there is an alkaline marsh. This township, though possessing a hard soil, will produce excellent crops after breaking up.—*J. S. O'Dwyer*, 1883.

- 27. Outlines.**—Rolling prairie, with high ridges and ponds. Soil, principally clay loam. Rates second and third class.—*C. F. Miles*, 1883.

- 28. Outlines.**—The north is very hilly prairie, interspersed with many marshes and lakes in the valleys. Soil, rich clay loam, of 15

inches, on clay subsoil. Class 2. The north-west is less hilly than the north-east.—*T. Fawcett*, 1883.

Along the western boundary, for the first two miles going north, rolling; and after that, undulating prairie. Ponds and marshes occur all along the line, and are quite numerous toward the north. Section 18 is crossed by a trail. Soil, clay loam on a clay subsoil. Rated classes 1 and 2.—*C. F. Miles*, 1883.

- 29** *Outlines*.—The south-west one-fourth is hilly, with numerous small ponds and grass swamps. The remainder is rolling. Stones are abundant on the hill tops. Good water is abundant. No timber of any kind. The soil is principally clay loam, and is excellent throughout. Classed, principally, 1 and 2, with some 3.—*F. W. Wilkins*, 1884.

The southern portion is hilly, with numerous ponds and marshes among the hills. The soil is a good clay loam. There are scattered boulders on the hill tops.—*T. Fawcett*, 1883.

- 30** *Outlines*.—Is rolling throughout. Sounding Creek, flowing in a deep valley, about half a mile in width, crosses from west to east. This stream is here about 10 feet wide, 6 inches deep, with current about two miles an hour. Its water is slightly alkaline. A deep valley, containing the bed of a very small stream (dry at the time of survey) joins the main valley of the creek in this township. The land is stony along the sides of the valleys. A large marsh enters the township near the north-west angle. Good water is plentiful. No timber of any kind. The soil is, in general, good, being both sand and clay loam. Classed 1 to 2, with some 3.—*F. W. Wilkins*, 1884.

- 31** *Outlines*.—Is rolling to heavily-rolling, in general. Several water-courses, draining to south-east, cross this township. Some stony land was seen. Good water is abundant. No timber of any kind. Soil, in general, a good sand or clay loam. Classed 1 to 2.—*F. W. Wilkins*, 1884.

- 32** *Outlines*.—Along the north boundary, rough hilly prairie, becoming smoother toward the east. On the western half of Section 36 is a creek, which connects with a small body of water a few rods north of the line. No wood.—*E. Bray*, 1883.

Is, in general, hilly, with some rolling land in the southern part. The hills rise to a high range near the extreme north. Water, both good and bad, is plentiful. Some stony land, in ridges, exists in places. No timber of any kind. The soil is generally a sand loam, rather light in the south-east. Classed from 1 to 3.—*F. W. Wilkins*, 1884.

- 33** *Outlines*.—The south-west half is rolling, while the north-east half is very level, being in the broad valley of Sounding Creek. A very small stream, tributary to Sounding Creek, crosses the township at the south. On or about Section 17 are several hills of considerable altitude, composed of soft sandstone, with bands of clay ironstone and brown shale. Good water is reasonably plentiful. No timber, other than a few cherry and saskatoon bush near the Sandstone Hills. Raspberries and gooseberries w

plentiful in this locality also. The soil in the south-west is very good, sand loam and clay loam. In the creek valley the soil is rather light. Classed from 1 to 3.—*F. W. Wilkins*, 1884.

34. *Outlines.*—As a rule, is very level, lying almost wholly in the broad valley of Sounding Creek. In the south, this creek expands into a good sized shallow lake, and at the north finds its way to the north, through a large marsh. Good water is not plentiful. No timber of any kind. The soil, in general, is very light and sandy, and in places gravelly. Classed mostly 3.—*F. W. Wilkins*, 1884.

35. *Outlines.*—The central one-half from north to south lies in the valley of Sounding Creek, and is almost a dead level. The balance is mostly rolling land, considerably cut up by deep ravines draining from both sides into Sounding Creek. This creek runs almost due north, is about 25 feet wide, 3 feet deep, with a very muddy bottom, slow current and slightly saline water. Good water is reasonably plentiful throughout the township. No timber of any kind. The soil in the creek valley is a hard clay in general. Elsewhere it is a good sand loam. Some very stony tracts exist. Classed from 1 to 4.—*F. W. Wilkins*, 1884.

36. *Outlines.*—The north boundary line crosses the two horns of crescent-shaped Sounding Lake. The first arm of this lake is one and a-half miles wide; the second is nearly three miles in width, while the peninsula between them has a width of one and three-quarter miles. It is surrounded by a hilly country, containing a considerable quantity of fair sized poplar. The outlet of the lake, Eye Hill Creek, is situated about 20 chains north of where the base line first strikes the easterly shore. This last mentioned creek flows easterly, keeping from one to three miles north of the base.—*T. Kains*, 1882.

A considerable portion of the northern part is occupied by the two arms of Sounding Lake. This lake (the water of which is good except when very low) is of considerable extent, and is apparently very shallow. The greater portion of the land part of the east boundary of this township lies in the valley of Sounding Creek. The balance is very hilly and stony (except immediately along the lake shore), and rises to a very high range of hills at the south. Good water is plentiful in the hilly part, only where some very stony land exists. Sounding Creek is about 25 feet wide and 3 feet deep, with a muddy bottom, saline water and slow current. One nice clump of poplar wood, fit for firewood and rails, lies to the south of Sounding Lake, in the north-east. There is no first class land in this township; either it is too stony and hilly, or it is too light, or too hard. Classed from 2 to 4.—*F. W. Wilkins*, 1884.

37. *Outlines.*—The south is broken by Sounding Lake, which has an extreme east and west length of about six and a-half miles. The north shores and sides of valley, are thickly wooded with poplar. Poplar is also thinly scattered over the remainder of the surface. The soil is of a poor, light, sandy description, and classes 3 to 4.

Good grazing is procurable in many places.—*F. W. Wilkins*, 1884.

The south is broken by Sounding Lake, which is surrounded by a hilly country, containing a considerable quantity of fair sized poplar. The arms of the lake extend south of the base about two miles. The easterly arm terminates in a large creek flowing north into the lake.—*T. Kains*, 1882.

38. Outlines.—A range of hills runs north-westerly from the south-east corner of this township, and has a scattered growth of poplar on the easterly part, which becomes very dense and heavy where the west boundary crosses it in Sections 19 and 30, many of the trees being from 8 to 10 inches in diameter. The north-east half is open and generally rolling, and a depression or valley, containing large ponds, extends westerly from Section 25. The soil varies from dark loam in the north to sandy loam and sand in the south, and is classed 1 to 4.—*J. F. Garden*, 1884.

39. Outlines.—Along the western boundary the surface is generally broken by hills and valleys, with some scattered poplar and willows, the soil being sandy, and classed 3 to 4. A valley, with its large ponds or small lakes enters the north-west corner. The greater part of its area is open and rolling, and in one or two places hilly prairie, with some large ponds in the south-east, containing good water, and with some grazing about them. The soil is a dark loam or a sandy loam, classed 1 to 2.—*J. F. Garden*, 1884.

40. Outlines.—North, the surface is chiefly undulating or rolling, and in some places low and wet. Section 32 consists of low sandhills with willow scrub, alkali beds, marshes and willows in water. Soil, principally, black loam, averaging about 8 inches in depth, with sandy subsoil. Class 1.—*C. A. Magrath*, 1883.

Is high and broken along the western boundary, which passes through sand ridges with scattered poplar and willows and alkaline bottom lands. Some large ponds are situated in the south-west. This portion is class 4. The easterly and larger portion of the area is open, rolling prairie, with good grass in the hollows and about the sloughs. The soil is principally loam, or light sandy soil, being class 1 to 3.—*J. F. Garden*, 1884.

41. Outlines.—Has but very little bush, having generally an open, rolling or hilly surface. Along part of the northern boundary the surface is undulating, the soil being dark loam, class 1. A large alkaline slough or marsh crosses into it in Sections 18 and 19, extending easterly. Along this side the soil is sandy loam, or sandy, classes 2 to 3. In the eastern parts the surface is hilly or broken. The hollows contain ponds or sloughs, and the soil is a hard sandy loam. Class 3. A valley, with marshy land, runs westerly from Section 12, being the source of the small creek in Township 41, Range 3.—*J. F. Garden*, 1884.

South, undulating or rolling. Soil, principally, black loam, averaging about 8 inches in depth, with sandy subsoil, Class 1.—*C. A. Magrath*, 1883.

- 42. Outlines.**—The north-west portion is high, and broken by sandy ridges, with poplar and willows, and small lakes or ponds in some of the valleys. Class 4. Along the southern boundary the surface is open, rolling or undulating, the soil being dark loam; class 1. In the easterly part the surface is cut up by low sandy ridges, with scrubby poplar; class 4. In the north it is high and rolling, with a little poplar and willow, and some good clay loam soil; class 1. A small stream leading from extensive muskegs and ponds in the north-westerly parts runs north-easterly, leaving the township in Section 33.—*J. F. Garden, 1884.*
- 43. Outlines.**—In the north-west corner the land is sandy, hilly and broken, thickly covered with poplars, some of them 8 inches through, mixed with willows and scrub brush; class 4. Along the west boundary, south of this broken part, the surface is undulating and sandy, with low scattered poplar, willow, ground cedar and poor grass; class 4. In the eastern portions the land is broken by sand ridges, and has small poplars, willows, poor grass and no water; class 4. Ribstone Creek crosses the north-east corner, running in a south-easterly direction, entering in Section 35 and leaving in Section 24. Its valley contains muskeg and willows. There is some good clay loam soil along the southern boundary, which is generally rolling, with a little poplar; class 1.—*J. F. Garden, 1884.*
- 44. Outlines.**—North, hilly country, with numerous ponds and bluffs of poplar and willow. In Section 34 there is a lake. The greater part of Section 33 is covered with poplar timber, some of which is of good size and quality. There is also some birch wood. The soil in this Section is chiefly clay loam over clay, and is rated class 3. Along the rest of the line it is alternately clay or sandy loam, 3 or 4 inches deep, with clay or sandy subsoil; class 1.—*T. Kains, 1883.*
- In the south-westerly corner a high range of sandy hills, 150 feet elevation, falls to the north and east, densely covered with poplar; class 4. In the north-west the land is undulating and falling to the south, with but little bush. Ribstone Creek enters in Section 30, and following a south-east course, leaves the township in Section 2, having low, wet flats, with willows and rank grass adjoining it. In the north-east the surface is high, and broken by short ridges and knolls, descending to the south, with ponds, sloughs and good grass in the hollows. The soil here is dark loam, classes 2 to 3. Some burnt poplar bluffs appear in this portion. In the south-east low sand ridges, with poplar, break the surface. Large ponds, extending east and west, were observed in a depression in Section 13. On the south boundary the country is hilly and knolly, and, in the centre, is much broken by large ponds, surrounded by a fair growth of good sized poplar.—*J. F. Garden, 1884.*
- 45. Outlines.**—Is very hilly, and broken by deep ponds and lakelets, and heavily timbered with large poplar in clumps, mostly dry, having been destroyed by prairie fire. The soil is a rich black loam, of a first class quality. A creek crosses Section 36. From

thence the country becomes rolling towards the north.—*P. R. A. Belanger, 1884.*

46. *Outlines.*—Is hilly, and mostly covered with burnt underbrush. The soil is good in the south half, and rates 1st class, but it turns to light sand in the north half, and in the neighborhood of a large lake near the west boundary. There is good water in the ponds.—*P. R. A. Belanger, 1884.*

47. *Outlines.*—The south-west half is hilly, and broken by Battle River, which runs along the west boundary and enters Section 7, running across the south tier of sections in an easterly direction as far as Section 1, where it turns south-easterly and crosses the correction line. Scattered clumps of young poplar are occasionally met with, principally in the valley of the river, where they are large in size. The north-east half is ordinary rolling prairie. The soil rates first class —*P. R. A. Belanger, 1884.*

48. *Outlines.*—The surface is principally hilly prairie, with black loam soil, 10 inches deep, on a clay subsoil; class 1. About midway on Section 34 is a lake, on the line, about a mile long, along the shores of which is some scrub and small poplar. West of this there are a few ponds and grass swamps, and one or two small creeks flowing southward across the line on Sections 31 and 32, respectively. Wood is scarce.—*T. Kains, 1882.*

Is rolling prairie in the west half and hilly in the east half, which forms part of Blackfoot Hills. It is broken by a considerable quantity of ponds, marshes and lakes. Bluffs of wood appear amongst the hills. The Battleford and Edmonton trail and telegraph line cross through the south part. The soil has been classified as first class.—*P. R. A. Belanger, 1884.*

49. *Outlines.*—High, hilly prairie, interspersed with large bluffs of large sized poplar in the hills. This township is mostly occupied by Blackfoot Hills, and appears to be the height of land between Saskatchewan and Battle Rivers. It is broken by numerous ponds, lakelets and hay marshes. The soil is a clay loam, of first-class quality.—*P. R. A. Belanger, 1884.*

Outlines.—The south-east is high, hilly prairie, with numerous ponds and swamps, in places bordered with small poplar and willows. Soil, first class quality, being a black vegetable mould. West half not so hilly as the east half.—*T. Kains, 1882.*

Is generally heavy, rolling prairie, with the exception of the south-west quarter, which is high and hilly, and where numerous bluffs of heavy timber were seen. A large lake occupies the centre of the township. It is bordered in many places with willows. This lake takes its water from the hills around it, and flows north-easterly into the Vermillion River, and then into the Saskatchewan River. Numerous ponds and lakelets. The soil ranks first class, except around the lake on, the south side, where it is alkaline.—*P. R. A. Belanger, 1884.*

Outlines—Is mostly prairie, with a very few patches of willows and young poplar. It is heavy rolling in the east half and gently rolling in the west half. Numerous ponds and lakelets occur

with. An extensive lake is crossed by the west boundary of Sections 6, 7 and 18. A creek runs through the centre of this township in a north-easterly direction to the Vermillion River. The soil ranks first class, being either black loam or clay loam, with clay subsoil.—*P. R. A. Belanger*, 1884.

- 52. Outlines.**—Is ordinary rolling prairie, with clumps of young poplar and willows on its west boundary, but turns hilly and knolly in its centre, where it also appears heavily timbered. The Vermillion River enters in Section 6 and runs across the township easterly and north-easterly. It then goes out in Section 12, and flows into the Saskatchewan River. It is a stream 3 feet deep by 1 chain and 32 links broad, where crossed on west boundary, and has good water, a muddy bottom and slow current. A large belt of long hay grows along its shores, for many miles on both sides of the west boundary. Another beautiful stream, from 10 to 15 links broad and 1 foot deep, running through a lake in the north-west corner, runs in a south-easterly direction, probably to the Vermillion River. The soil is first class, being rich clay loam, with clay subsoil.—*P. R. A. Belanger*, 1884.

The north boundary line crosses a marsh on Sections 36, 35, 34 and 33. In Section 31 it crosses two ponds, and then a high ridge, and passes on the north side of a lake in Section 31. There are some clumps of timber of good size, as large as 12 inches. The land is of an almost uniformly excellent character. Universally fresh water.—*W. A. Ashe*, 1882.

- 53. Outlines.**—From the westerly boundary, so far as the surveyor had opportunity to notice, he found the land to be either rolling or rough prairie, dotted with bluffs of poplar and scrub, and broken, to some extent, by small lakes. Part of Section 36 is composed of light sand, but the soil of the remaining sections appears to be very good. Vermillion River flows in a north-easterly direction through the south-easterly part of this township.—*E. Bray*, 1884.

- 54. Outlines.**—This is rolling land, mostly covered with bluffs of small poplar and scrub. Ponds of good water are plentiful, while a fine stream runs easterly through the southerly part, along which the soil is frequently a poor sand. Some light sand was also found in Sections 31 and 32. With these exceptions, the soil in this township is of very fair quality.—*E. Bray*, 1884.

- 55. Outlines.**—The Saskatchewan River runs south-easterly from about Section 33 to Section 13. North of the river the land mostly covered with woods of small poplar. Timber of the same description is also abundant on the south side of the river, for width of about one mile; while further south the land becomes scrubby, and sometimes open. Excepting the river banks, the surface is generally rolling and the soil about 2nd class.—*E. Bray*, 1884.

- 56. Outlines.**—The Saskatchewan River enters in Section 7 and flows south-easterly, crossing the south boundary at about Sections 5 and 4. The small tract lying south of the river is wooded with

poplar and spruce, and tamarac swamps and some open land in Section 6. North of the river, each boundary passes over scrubby or timbered land, of fair quality, but in the interior of the township, extensive tracts of poor, open sandy land abound, which alternate with bluffs and belts of pine, spruce and poplar. Some hilly land lies in and near the north-westerly corner of the township but elsewhere the land is rolling.—*E. Bray*, 1884.

Along the north boundary it is thickly timbered with poplar and scrub, and with patches of spruce in places. The timber is small, and of little value. The land is poor, very rough and broken, and cut up by ponds, muskegs, &c.—*G. B. Abrey*, 1883.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE V.

5. *Outlines*.—Along the south boundary, rolling prairie, broken toward the east by ravines. The soil is poor. Cactus is abundant.—*O. J. Klotz*, 1883

West, rolling and undulating, and crossed by a number of coulées, one of which, on Section 19, is well wooded with maple, poplar and willows. There is also good water in this coulée in small quantities. Eastwards it is a very broken country, greatly cut up by a regular network of coulées. The soil throughout the township is a granular grey clay, with hard clay subsoil, and almost destitute of vegetation.—*C. E. Wolff*, 1883.

6. *Outlines*.—Undulating prairie. Soil, a hard, grey clay, in many places mixed with gravel; subsoil, clay. In Section 6 is a large coulée, with several smaller ones running into it. Over on the east side of the township the surface is a little hilly, and broken by a number of coulées in the south, and the soil is a sandy clay loam, with clay subsoil.—*C. E. Wolff*, 1883.

7. *Outlines*.—West, rolling prairie, broken at intervals by deep coulées, in one of which, in Section 18, is a small creek. Soil, clay loam; class 3 in the west, and the gravelly and stony portions in the east, class 4. A creek crosses the line several times in Sections 36 and 25. A trail passes across the latter section.—*J. G. Sing*, 1883.

8. *Outlines*.—The north is rolling prairie, but is considerably broken by ravines toward the east, in some of which there are creeks or ponds. The eastern half of Section 36 is a marsh. There is no wood. The soil is good.—*O. J. Klotz*, 1883.

Rough, broken, rolling and stony prairie, with coulées and numerous small hills, except in the south-east, where it is rolling. Piegan Creek crosses at Section 6. A portion of a large lake in the north-west quarter of this township extends into Sections 30 and 31. Soil, black sandy loam, class 3, except in the central east, where the soil is gravelly, class 4. On the southern half of Section 36 is a running creek, which takes its rise from a lake east of the line.—*J. G. Sing*, 1883.

Sub-division.—Hilly and broken with deep ravines, which generally have small creeks flowing in them. The soil is a fair clay loam in the valleys, but stony on the elevations. The rough character of the township renders it unavailable for agricultural purposes, but it is fine for grazing. There is a large fresh-water lake in Sections 29, 30, 31 and 32. There is no wood of any kind in the township.—*J. F. Snow*, 1884.

9. *Outlines*.—Judged from the west and east, it is all rolling prairie, very stony on the northern sections, where the surface is considerably broken by hills and coulées. The soil is either clay loam

or clay mixed with sand or gravel. Class 2, generally, but with considerable 3 and some 4. A small creek flows northward through Sections 30 and 31. The township appears to be fairly well watered by sloughs and small lakes, which are more plentiful on the east side.—*J. G. Sing*, 1883.

Southwards, good soil, but cut up by deep ravines, having creeks, the greater part of which will probably be dry in the fall. The cut banks of these ravines are a sandy clay, with erratic blocks of granite and sandstone imbedded.—*O. J. Klotz*, 1883.

Sub-division.—Very rolling, and broken by several dry creek valleys and ravines. Soil, a clay loam, generally class 1, and lying on a subsoil of all clay. Fresh water is scarce, but good.—*C. C. Duberger*, 1883.

- 10. Outlines**.—Westwards, the soil is principally clay, or clay and sand. Class 2. Big Plume Creek flows northwardly, not far east of the line. East, clay, gravel or gravelly clay soil. Classes 1 and 2. Section 1 is hilly, with clay and gravel. Class 3. On Section 24 the line is crossed three times by a creek surrounded by hills. The general surface is rolling.—*J. G. Sing*, 1883.

Sub-division.—Very similar to No. 9 of this range. Is a good agricultural township, and has some wood growing in the ravines in the western portion, measuring from 4 to 1, inches in diameter, suitable for fuel and fences.—*C. C. Duberger*, 1883.

- 11. Outlines**.—The west has wide valleys, containing fine grazing land. Soil, principally, sandy loam; class 2. The east is rolling prairie, with good soil, consisting of sandy loam, clay, sand and clay, or sand and gravel. Chiefly class 1, with some 2 and 3 along the central, east and south-east sections. Sections 12 and 1 are a little stony. Plenty of water is furnished by lakes and sloughs.—*J. G. Sing*, 1883.

Sub-division.—Is less a rolling prairie than Township No. 9 of this range, but is exactly similar in all other respects. There are no trees, but wood may be obtained in abundance from the Saskatchewan River, which crosses the next adjoining township to the north.—*C. C. DuBerger*, 1883.

- 12. Outlines**.—The South Saskatchewan River crosses Section 33 in a valley 250 feet deep. East of the river is a large clay flat. About 60 chains south of the north line, Bull's Head Coulee enters the valley from the south-east, and along this coulee the C. P. R. approaches the river. West of the river there is a grove of cottonwood trees, 8 to 24 inches diameter. Fine flats on the south side extend westward from Bull's Head Coulee past Seven Persons' Coulee. Quite a settlement has sprung up here.—*C. A. Magrath*, 1882.

The west boundary lies over, principally, rolling prairie, but on the northern sections it is broken by the South Saskatchewan and Seven Persons' Rivers. The width of the former is 52 rods, and of the latter about 20 feet. On the banks of each there is some poplar bush. The line is also crossed by the C. P. R. near the north-west corner of the township, and a little further south by the Calgary and McLeod trails. The soil is chiefly sandy loam,

with some gravelly clay in the neighborhood of the Saskatchewan. It is rated class 2 throughout. The east is rolling prairie, broken by one or two deep coulées, and by the valley of Ross Creek, flowing north-west, on Section 24. Soil, sandy loam. Classes 1 and 2 on the two northern sections; on the rest, clay loam, classes 1, 2 and 3, improving toward the south. The C. P. R. enters the township on Section 12.—*J. G. Sing*, 1883.

Sub-division.—Much broken by the valleys of the South Saskatchewan and Seven Persons' River, and Big Plume and Ross Creeks. The soil is generally sand and clay, classes 2 and 3, and is very dry. There is an excellent mineral spring on the eastern boundary of Section 21. The C. P. R. passes diagonally across the township, and crosses the Saskatchewan by a bridge at Medicine Hat, in Section 31. A local ferry is in operation at this point also.—*A. C. Webb*, 1883.

13 *Outlines*.—The south-westerly quarter is a level prairie, and very fair land. The soil is a grey clay, on a bluish clay subsoil, interspersed with occasional intervals of sand. There are some settlers here. The north of Section 18 is crossed by the South Saskatchewan River, which then flows north, immediately west of the line, which it re-crosses on the southern half of 31, and from there, meanders along the north boundary. Cottonwood of good size, quality and quantity, grows all along the river bottom. There are also many indications of coal on the southern banks. Medicine Hat crossing is just south of the township.—*F. W. Armstrong*, 1883.

The west of the south boundary is broken by the Saskatchewan—already described in the north of 12. The eastern end is undulating, as is also the eastern boundary, going north, for the first two miles, with a clay loam soil. After that the land rises to the north, and on Section 36 there are sandhills.—*C. A. Magrath*, 1882.

Sub-division.—Very broken by the valley of the Saskatchewan River, particularly in the southern half, which is permeated by gullies and ravines. The soil is a dry, sandy loam, and classes 2 and 3. The best land lies towards the north, but none can be classed excellent. The South Saskatchewan River courses over the south-east corner sections in a very circuitous manner and according to the bends of the river, alternates in high, abrupt, precipitous and broken banks on the one side, and comparatively level flats on the other. The water in the river (September) was cold, clear and pure, about one-eighth of a mile wide, with a four mile current and a depth of 2 to 10 feet. The banks are fully 300 feet high, and frequently broken by deep coulées and precipitous cliffs, extending inland, in many instances, for two miles. There are many evidences of coal (lignite) seams along the banks. The soil of the township—where not broken by coulées—is more fertile than the river flats, which are not so good as their position would lead one to expect, and which is shown by the wild cactus and sage bush growing on them. There are some squatters on sections 4, 6 and 18, who have log houses constructed from cot-

tonwood trees, and have done some "breaking" and planting with satisfactory results. About 1,100 head of cattle are grazing here (1883), and look well. They are to remain over the winter. It is an admirable grazing ground.—*T. Brownjohn*, 1883.

- 14. Outlines.**—North, west and south is a rolling prairie. The soil, for the most part, is pure sand. There are some good springs of water flowing through deep ravines down to the river. Poplar of considerable size may be found growing along these gullies. The river traverses this township. That portion of the township to the east is one mass of conical-shaped clay cliffs.—*F. W. Armstrong*, 1883.

Westwards, it is very sandy, almost destitute of vegetation.—*C. E. Wolff*, 1882.

East, Section 1 is rolling prairie. Soil, very good. The remaining five sections of this line going northwards, pass over coulées from 50 to 100 feet deep, running into the South Saskatchewan River, which is from one and a-half to four miles west, and runs in a northerly direction.—*C. A. Magrath*, 1882.

Sub-division.—The South Saskatchewan River crosses by a very circuitous route from west to east, which breaks up the township very much. The banks—alternating with the bends of the river—are very abrupt, precipitous and broken, from 200 to 300 feet high, and the right bank is especially broken, as from it, run inland steep and broken coulées, forming a very chaos of cut banks, hills and ravines. Where there are any plains or plateau, the soil is sterile sand and gravel, and there are few inviting parts for the agriculturist. In Sections 32 and 33 is a long lake, called the Old Channel Lake, supposed to be a former bed of the river. Evidences of coal (lignite) are not frequent.—*T. Brownjohn*, 1883.

- 15. Outlines.**—The northern portion is hilly and broken, the soil a poor, light sand. The prairie is overgrown with cactus and sage plants. The southern portion is not quite so hilly. The Saskatchewan flows from south to north, very circuitously, through the centre of the township.—*F. W. Armstrong*, 1883.

Eastwards, going southwards, the sand increases, until the southern part, where it becomes pure, drifting sand.—*O. J. Klotz*, 1882.

Sub-division.—The South Saskatchewan River flows northwards across the centre of this township, maintaining an extremely meandering course, which makes the valley of the river very wide, and the area of broken land very extensive in consequence. The soil is generally sandy and gravelly in the river sections, but more loamy on the east and west parts of the township. There is some wood in Sections 3, 4, 21, 22, 27 and 28, good for fuel only.—*A. Bourgeault*, 1883.

- 16. Outlines.**—North, soil sandy and dry. The river banks here are 300 feet high, and, in places, precipitous. Formations are horizontal clay, alternating with friable sandstone. There is an abundance of friable lignite in these seams, in the banks. Seams, two feet thick, of shaly, earthy lignite, were also found, but this is

worthless. Generally, on the concave side of the course of the river is a flat, on which are a few green trees, poplar and scrub, the opposite, or convex side, being precipitous. Going westward from the river, and along the eastern boundary, the country is hilly. The soil stony and sandy.—*O. J. Klotz*, 1882.

Is hilly and broken. The soil is a poor light sand. No water, except in the river, which almost divides the township in two. The prairie is overgrown with cactus and sage plants. There is some timber in patches along the river banks in the valley, which is only approachable in a few places, being about 250 or 300 feet deep. The river, at the time of the survey, was about 12 feet deep in the centre, and about 12 chains wide. The current is very strong.—*F. W. Armstrong*, 1883.

Sub-division.—The South Saskatchewan River flows through this township, entering midway on the southern boundary and making a comparatively straight course, passes out on Section 35. For about half a mile on each side of the river the land is very much broken by the banks, and is class 4, the soil in many instances being pure sand. Many seams of good coal occur, particularly on Sections 23, 16 and 10. On the southern portions of Sections 3 and 4, on both sides of the river, there are a number of cottonwood trees, 18 to 20 inches in diameter. West of the river banks the country is principally rolling prairie, but is broken, hilly and stony at intervals. The soil is generally a mixture of sand and gravel. Class 3. There is, however, some good land on Section 18 and in its vicinity, where the surface is undulating prairie, and the soil sandy loam over clay. Class 1. The country on the east side of the river and its banks is rated classes 1, 2 and 3, the surface being mainly undulating prairie, and the soil sandy loam.—*A. Bourgeault*, 1883.

17. *Outlines.*—Open, rolling prairie. Saskatchewan River flows through the south-east corner in a deep valley, wooded in places with cottonwood, some of which exceeds 18 inches diameter. This township is very rough and broken by deep ravines running into the river. Soil is below class 2, being boulder strewn, gravelly and very dry, with scanty vegetation. Contains little wood.—*L. R. Ord*, 1882.

Southwards, this township has a sandy and dry soil. The Saskatchewan River has here steep and precipitous banks, which are described in Township 16. The south-westerly sections are hilly, stony and dry. Along the east boundary there are sand-hills with abundance of cactus. The river leaves the township in Section 24, and at this point the banks are not very high or steep.—*O. J. Klotz*, 1882.

Sub-division.—The south Saskatchewan River flows through the two eastern rows or tiers of sections. The banks are high, but the river is more accessible here than further east, and the neighboring sections—10, 11, 14, 15, 19, 20, 21, 22, 23, 24, 25, 26, 27 and 30—are good sections for settlement, having a pretty rich sandy loam. The remainder of the township is poor.—*J. I. Dufresne*, 1883.

- 18** *Outlines.*—Surveyed the north, west and south. It is open, rolling prairie. No wood. Soil, classes 2 and 3, shallow, dry and sandy, with saline lakes.—*L. R. Ord*, 1882.

East, the soil is sandy. In the north-eastern part is a large alkaline flat, running north-easterly and south-westerly, the ponds therein being very bitter and unfit for use.—*O. J. Klotz*, 1882.

Sub-division.—Rough and broken. Soil, clay and sand, on sandy subsoil. Classes 2, 3 and 4. Marshes and small lakes occur in various places, but they are saline. Fresh water is scarce, but may be obtained anywhere at a few feet deep.—*J. I. Dufresne*, 1883.

- 19.** *Outlines.*—East, the land along here is very poor, and towards the southern part very alkaline, with high, rolling hills. In Section 13, and southwards, a level flat, bordering on a large alkaline lake, which extends from here to Section 1. The soil is, for the most part, sandy, but on Section 36 it consists of a couple of inches, clay loam, over gravel, and is class 4 throughout. No wood.—*T. Drummond*, 1882.

Surveyed north, west and south. Open, rolling prairie; no wood; little water. Soil, class 2, shallow and gravelly. A little vegetation.—*L. R. Ord*, 1882.

Sub-division.—The surface features of this township are very similar to those of No. 18.—*J. I. Dufresne*, 1883.

- 20.** *Outlines.*—North and east, prairie, with high rolling hills. No wood or water. In the north: soil, clay; rated class 2 on Sections 31, 32 and 36, and class 3 elsewhere. In the east, the soil, for the most part, is gravelly, but the southern portions of 24 and 1 are clay, and the northern portions sandy. It is rated class 2 on the three southern sections.—*T. Drummond*, 1882.

West and south, open, rolling prairie. No wood. Soil, class 2; sandy loam of fair quality, but very dry. Grass, in general, luxuriant. Numerous brackish ponds in western portion.—*L. R. Ord*, 1882.

Sub-division.—Similar features to Townships 18 and 19 of this range. Probably has a less supply of surface water.—*J. I. Dufresne*, 1883.

- 21.** *Outlines.*—Very hilly and stony. The average height of the hills is 15 or 20 feet. Soil, a sandy clay, with sometimes sandy loam, of a poor quality, in Sections 34, 35 and 36. The ground rises for about three miles from the southern boundary, going north; then slopes down constantly, undulating considerably, towards the Red Deer River. The south sections, therefore, possess ponds and marshes containing very good water; but as soon as the ground falls towards the Red Deer, not a drop of water is to be found. The township, generally, may be classed as 3rd rate. However, in the rows of sections adjoining the north boundary the surface is level, and without stones.—*C. Desjardins*, 1882.

East, chiefly prairie, with high rolling hills. Soil, principally black loam, 4 inches deep, with clay subsoil. On Section 36 it is stony and sandy, with gravel subsoil. It is rated class 1

on Sections 12, 13 and 24, and class 2 on the rest. Southwards the surface is rough, and soil class 2.—*T. Drummond*, 1882.

Sub-division.—The north and north-east is flat and undulating. The diagonal central belt—being the greater portion—is rolling, and the south-west is hilly. The soil is a sandy loam—classes 2 to 3—the subsoil being sandy and gravelly. Water scarce. No wood; but an ample supply may be obtained in Township 22, adjoining the Red Deer River. The Red Deer Valley cart trail—an excellent one—passes along the north.—*J. S. O'Dwyer*, 1883.

22. *Outlines.*—Hilly and undulating. The Red Deer River crosses in the southerly third of the township. There are sand bars, and several channels. The river, on the 26th of August, was $3\frac{1}{2}$ to 4 feet deep at the west boundary, in the deepest water. The north of the river is covered with willows, young poplar and scattered cottonwood. The north bank of the valley extends to Section 19. North of that the surface only shows long undulations. South and south-east, this township is composed of light sandy loam, while north it consists of light clay and gravel. It is third class for agricultural purposes.—*C. Desjardins*, 1882.

East: on Section 1 the Red Deer River, flowing east, is shallow and full of sand bars. Its banks are about 150 feet high. For two miles north of this the surface is generally rolling prairie, considerably broken by gullies on Section 13. The three northern sections consist of prairie, with high, rolling hills, and gravel soil; class 3. The soil along the rest of the line is composed of stone and gravel, with some sand and clay on Section 1 and the northern half of 12, all rated class 4. No wood, except that there appears to be a little cottonwood and poplar timber all along the river, where there are no cut banks.—*T. Drummond*, 1882.

Sub-division.—The Red Deer River—coursing east—divides the township into two parts. The valley is 175 to 200 feet below the surrounding country, and has a width of from $1\frac{1}{4}$ to 3 miles, and contains rich agricultural land—a clay loam, class 1, particularly in Sections 7, 8, 17 and 18. The remainder of the valley, on the north bank, contains, equally good soil but is occasionally broken by ridges, between which rich land is procurable. The river has a width of from 19 to 34 chains and a current of about $2\frac{1}{2}$ miles an hour. It would offer a safe passage to boats of 3 or 4 feet draft, and contains very few sand bars. A cart trail follows the river bank. The country north of the river is hilly, suitable for grazing; that south of the river is, with the exception of Section 3 and parts of 2 and 4, very broken by bluffs and ravines extending from the river inland. Water, generally, is scarce. There is an ample supply of wood.—*J. S. O'Dwyer*, 1883.

23. *Outlines.*—This township is very hilly. The hills are from 80 to 150 feet above the valley of a dry creek which crosses the north-east half of the township. The soil is light, sandy loam and gravel; the hills are stony, with boulders of gneiss and limestone. Very few marshes, and water very scarce in middle of the summer.—*A. F. Cotton*, 1882.

Eastwards, the surface is very rough and stony. Poor gravelly soil, from 6 to 15 inches deep. The southern half of the easterly tier of sections is occupied by the valley of an alkaline creek, nearly dry.—*W. Ogilvie*, 1882.

Sub-division.—Hilly prairie, in places rough and broken. Soil, sandy loam, classes 2 to 3, on sandy and gravelly subsoil. Abundance of good fresh-water contained in marshes and creeks. The township is suitable for grazing, having excellent grass and plenty of water and shelter, but in many places, especially in the lower levels and between the ridges and hills, there are good localities for settlement.—*J. S. O'Dwyer*, 1883.

- 24. Outlines**.—North, surface rolling. Soil, sandy loam, sometimes sand, from 6 to 12 inches deep. Subsoil generally clay. Very little water.—*W. Ogilvie*, 1882.

Mostly high-rolling prairie, excepting in the south, hilly and broken. The soil is a light sandy loam and gravel. A great many boulders of gneiss and limestone form a great impediment to agriculture. There is a creek, dry when seen, running through the centre, from north-west to south-east. It has a valley about three-quarters of a mile wide, and is about 150 feet below the prairie level. Water scarce.—*A. F. Cotton*, 1882.

East, surface rolling. Soil, a light clayey loam, from 8 to 16 inches deep. Subsoil, clay and sand hardened.—*W. Ogilvie*, 1882.

Sub-division.—Flat in the east; rolling in the centre, and hilly in the west, where the surface is broken by the valley of an alkaline creek, running southwards. Soil, sandy loam, classes 1 to 2, with a subsoil—eastwards—of clayey sand and—westwards—of gravel. Surface water is in limited supply, except a few small ponds. The eastern half is well adapted for settlement and agriculture; the west for grazing.—*J. S. O'Dwyer*, 1883.

- 25. Outlines**.—The west is all undulating prairie. Alkaline for some distance north and south, about a mile east of the boundary. Over to the east, Sections 1 and 13 are rolling. Section 12 hilly, and the rest undulating prairie. There are several watercourses along the east line, but they were all dry in July. Soil, clay loam, averaging about 10 inches in depth, with clay subsoil. Rated class 2 on Sections 1, 24 and the northern half of 13, and class 3 on the rest.—*C. F. Miles*, 1883.

South, rolling. Soil, sandy loam, sometimes sand; subsoil, gravelly clay. Very little water.—*W. Ogilvie*, 1882.

Sub-division.—Rolling prairie, except a few of the northern sections. An alkaline creek courses along the 3rd meridian from the east outline, and breaks these sections more or less. Sections 8, 17 and 20, are broken by a couple of alkaline lakes, and the easterly tier of sections contain a series of alkaline marshes, connected by a creek. The soil is a hard, sandy loam. Most of the surface is adapted for agriculture, although uninviting at first sight; but it ought to produce good crops after a thorough breaking up.—*J. S. O'Dwyer*, 1883.

- 26. Outlines**.—West and east, surface principally rolling prairie, with a few ravines and hills towards the south. There are a number of

marshes and reedy ponds in the valleys or ravines on Sections 1, 12, 13, 31 and 24, but, on the whole, water is rather scarce. Eastwards, the soil is clay loam, averaging 14 inches in depth, on a clay subsoil; rated class 2 on Sections 25, 36 and the south of 24, and class 3 on the rest.—*C. F. Miles*, 1883.

Sub-division.—The west half is undulating; eastwards, it is more broken by a range of high hills following the 2nd Meridian from the east, southward, for four and a-half miles, and having a belt width about one mile. With the exception of this hilly range, the remainder of the east is rolling prairie, havings cattered fresh-water sloughs and marshes. A large portion of this township is fair agricultural land, and the soil, though at first sight an uninviting and hard sandy loam, will yield well if broken up.—*J. S. O'Dwyer*, 1883.

27. Outlines.—Rolling prairie, with gravelly knolls and numerous ponds. Soil, sandy and clay loam. Rates second class. *C. F. Miles*, 1883.

28. Outlines.—North, rolling and undulating prairie; generally good land, rich clay and black loam, 15 to 20 inches, on clay subsoil—class 1. Some places are hilly, and interspersed with numerous marshes and small lakes—*T. Fawcett*, 1883.

Rolling prairie, with ponds. Soil, clay loam, with clay subsoil. Rates first and second class.—*C. F. Miles*, 1883.

29. Outlines.—Is inclined to hilliness in the south half, with numerous ponds and lakelets. The north half is more rolling. A valley of considerable width, and containing lakelets, exists in the central part. Good water is plentiful. No timber. The soil is a fair sand loam; classed from 1 to 3.—*F. W. Wilkins*, 1884.

South, gently-rolling prairie. Land, first class.—*T. Fawcett*, 1883.

30. Outlines.—Is, in general, of a rolling character, and about equally divided into north and south halves by Sounding Creek, which is here contained in a wide valley, along the sides of which there is a good deal of stony land. Sounding Creek has an eastern course, is about 6 feet wide, 6 inches deep, and has a current of about $1\frac{1}{2}$ miles an hour. The water is saline. A small tributary stream meets this creek from the north. Good water is reasonably abundant. No timber. The soil is principally a sand loam, of fair quality. Classed from 1 to 4.—*F. W. Wilkins*, 1884.

31. Outlines.—Is rolling, in general, with some hilliness at the south. Both good and bad water is abundant. No timber of any kind. The soil is, in general, a good sand or clay loam. Classed 1 and 2.—*F. W. Wilkins*, 1884.

32. Outlines.—The country along the north boundary is rolling in the west and hilly in the east. A creek flows in a north-easterly direction through the eastern portion of Section 36. No wood.—*E. Bray*, 1883.

Is rolling in the south-west half, but is exceedingly hilly in the north-east half, where some extremely high hills exist, with one conspicuous peak, visible for twenty-five miles around, are

known as the Sharp Hills. Except at the extreme north-west, water is plentiful throughout. A small stream, having a north-easterly course, rises in the Sharp Hills, and drains to Sounding Creek. The water of this stream is strongly impregnated with iron. Stones are plentiful on the hill tops. A little small poplar and cherrywood was found in the Sharp Hills, in a deep ravine. The soil is, in general, a good sand loam. Classed from 1 to 3.—*F. W. Wilkins, 1884.*

- 33. Outlines.**—Is mostly rolling, with a tract of hilly country in the central and southern portions. Good water is abundant. No timber of any kind. The soil is principally a fair sand loam. Classed from 1 to 3.—*F. W. Wilkins, 1884.*

Rolling in the south-west, and hilly in the south-east. A creek flows across the south-east corner of Section 1. No wood.—*E. Bray, 1883.*

- 34. Outlines.**—Is rolling throughout. A small stream of good water, with a rapid current, flowing through a deep, wide valley, crosses from south-west to north-east. Some nice groves of large poplars are growing in the ravines opening into the creek valley. The sides of the valley and ravines are very steep and stony. Good water is everywhere abundant. The soil is principally a fair sand loam. Classed from 1 to 3.—*F. W. Wilkins, 1884.*

- 35. Outlines**—The central and northern portions are inclined to hilliness; the rest is rolling. A very small stream of good water, in quite a deep, wide valley, crosses the township from west to east, near the south boundary. Stones are plentiful in the hilly portion. Good water is everywhere abundant. No timber of any kind. The soil is, in general, a good sand loam. Classed from 1 to 3.—*F. W. Wilkins, 1884.*

- 36. Outlines.**—North, the surface is principally high, hilly prairie, and the soil sandy loam, 2 to 8 inches in depth, on a sandy subsoil, with occasional intervals of clay loam, over clay, towards the east. Rated class 1 on Sections 35, 34 and the western half or 31; class 2 on 33, 32 and the balance of 31; and class 3 on 36. Sounding Lake extends into the latter section for a short distance on the east. In the east of 34 the line is crossed a couple of times by a creek. There is also a large pond in Section 32, slightly alkaline. No wood.—*T. Kains, 1883.*

Is very hilly in general, rising to very high hills at the north. There are two lakes of good size in the west part. Stones are plentiful in the hilly tract. Some excellent wood exists in a number of deep ravines amongst the hills at the extreme north. Cherries, saskatoon berries, raspberries and gooseberries grow in great profusion in these ravines. Good water is everywhere abundant. The soil, in general, is a good sand loam. Classed from 1 to 3.—*F. W. Wilkins, 1884.*

- 37. Outlines.**—South, high, hilly prairie, rising northwards, with a soil of sandy loam, 2 to 8 inches deep, on a sandy subsoil. In the west, class 2, and some clay loam over clay towards the east. Class 1. A portion of Section 1 is marshy, Sounding Lake extend-

ing to this point. The line passes through several valleys, in which are some large ponds toward the west, and on Section 3 there is a creek.—*T. Kains*, 1883.

The Neutral Hills—having an elevation of from 150 to 200 feet above the prairie level to the north—pass across the south-west corner. A few clumps of poplars were observed in the hollows. The soil here is a sandy loam, and classes from 3 to 4, as the surface is very irregular and broken. There is good water in ponds and sloughs, which are located in many of the hollows. Arms or inlets of Sounding Lake jut into the south-east corner for a short distance. The balance of the surface is rolling and sandy land, with scattered poplar and some willow in the north-east half. Good water in ponds and sloughs, with good grazing about them, were frequently met with in the north-west parts. The hills have poor grass on them, and in many places large quantities of ground cedar. The township classes from 3 to 4.—*J. F. Garden*, 1884.

38. *Outlines.*—A sand ridge, about 150 feet high, crosses from Section 24 to Section 30, and is thickly wooded with poplar, up to 8 inches in diameter. Poplar bush is also scattered over the rest of the township, the surface being either rolling or hilly, with sandy soil, and classes from 3 to 4. Numerous ponds are distributed throughout, with good grazing about them.—*J. F. Garden*, 1884.

39. *Outlines.*—Is composed of poor agricultural land, being broken by sand ridges or hills, ponds and sloughs, and in some places with alkaline bottom lands. Poplars and willows are scattered over the surface, and on many of the ridges ground cedar is common. In the north-west corner balm of Gilead trees, 12 inches in diameter, were observed. Good grasses grow about the ponds and sloughs. Classed from 3 to 4.—*J. F. Garden*, 1884.

40. *Outlines.*—North, principally rolling country, with bluffs of poplar, 2 to 8 inches in diameter. Towards the west there are some stretches of muskeg, willows in water, &c. Section 31 consists chiefly of hay meadows. Soil, sandy. Class 4 in Sections 33 and 35, and class 3 in the rest.—*C. A. Magrath*, 1883.

Has an undulating or rolling surface, with—in some parts—low sand ridges, poplar bluffs and willows being thinly scattered. There are many ponds and marshes, with good pasturage about them. This township can only be classed from 3 to 4.—*J. F. Garden*, 1884.

41. *Outlines.*—Southwards, rolling surface, poplar bluffs, some muskeg and hay meadows, and a sandy loam soil. Classes 3 and 4.—*C. A. Magrath*, 1883.

Is broken by hills, with ponds, lakes and sloughs in the hollows. A valley, about 60 feet deep, crosses the south-west corner, containing open, marshy land and sloughs. Ribstone Creek enters from the west in Section 30, and flows north-easterly in a broad, open flat, with marshes and coarse grass. The eastern portion is open and rolling. Some poplar clumps and willows are scattered in the south-western parts. The soil is poor, being light and

sandy—about third class. Some alkaline bottom lands are situate in the township —*J. F. Garden*, 1884.

42. Outlines.—Has generally a surface much broken by sandhills and ridges, with poplar and willows, which, in the northerly portions, become quite dense, some of the trees being 10 inches through. A number of good sized lakes were noted, one of them being in the south-east corner, another in Section 19, and another in Section 25. Ribstone Creek crosses the south-west corner, running north-westerly through a valley with muskeg and willows. The soil is principally sand. Classes 3 to 4.—*J. F. Garden*, 1884.

43. Outlines.—Has a high or hilly sandy surface in the northerly part, with much poplar and willow bush and some large lakes in the north-west corner. Ribstone Creek enters in Section 7, running north-easterly. It is bordered by a broad muskeg, with willows and with rolling sandy land. The south-easterly parts are rolling sandy land, with low scattered poplar and willows; also ground cedar. Without much water, and classes 3 to 4.—*J. F. Garden*, 1884.

44. Outlines.—North, the land is rolling, with scattered clumps of poplar, but eastward it becomes very broken and hilly. Numerous ponds among the hills. All of the latter are more or less heavily timbered. The soil in the bottoms is first class, but that on the hills is inclined to be light and sandy.—*T. Kains*, 1883.

Ribstone Creek runs north-easterly through this township, and leaves it in Section 25. Along the western boundary the surface is undulating or rolling with clumps of poplar and willows, good grazing and sandy loam soil. Class 2. In the north-east the land is rolling, and falling southerly to the creek, with ponds and sloughs and good pasturage. Sandy loam soil. Class 2. In the south-east the surface is broken by a range of sandhills 150 feet high, thickly wooded with poplar and willows, and contains some large ponds, having good water. This part has been classed from 3 to 4.—*J. F. Garden*, 1884.

45. Outlines.—Seen from the east boundary, is hilly in the east half, and heavily timbered. The west half appears to be a rolling country. It is broken by a considerable quantity of lakes and ponds. The land is first class.—*P. R. A. Belanger*, 1884.

South, the surface is principally rolling, with numerous ponds, swamps and clumps of poplar, willow and scrub, which, on the three eastern sections, are generally standing in water. The soil is, alternately, sandy or clay loam, 3 to 4 inches deep, with clay subsoil. Rated class 1 on the first and last miles, and class 2 on the rest.—*T. Kains*, 1883.

46. Outlines.—Is hilly, and mostly covered with burnt willows. This township, as well as Township 45, must have been heavily timbered at one time, to judge by the great quantity of dead wood lying on the ground. The north half is considerably broken by Battle River and its ravines. The soil is generally good.—*P. R. A. Belanger*, 1884.

47. Outlines.—Grizzly Bear Coulée enters this township, and empties its water into Battle River, which runs across the north half, as

far as the east boundary, and then turns south and follows the boundary for many miles. The land, though first class as to the soil, is much broken by the Coulée and Battle River in the north and east halves. Good water is in abundance in ponds.—*P. R. A. Belanger, 1884.*

- 48.** *Outlines.*—North, hilly prairie, except on Section 36, where it is rolling prairie. Ponds and grass swamps are numerous in the eastern and middle sections. Patches of scrub or willows occur, to some extent, on nearly every section, and, towards the west there are some scattered poplar bluffs. There are a couple of watercourses on Section 34 and another, of good spring water, in the east of 32. Soil, black loam, 10 inches deep, on an average, with clay subsoil. Class 1.—*T. Kains, 1882.*

The country is rolling and open in the east half, with a first class soil and numerous ponds, marshes and lakelets. Bluffs of timber appear in the west part. Grizzly Bear Coulée enters the north-west corner and runs across in a south-easterly direction.—*P. R. A. Belanger, 1884.*

- 49.** *Outlines*—Is mostly high, hilly prairie, interspersed with numerous ponds and lakes, and a few clumps of poplar that were met with in the south-west quarter and in Section 36. A small creek runs through the south-west half, in a southerly direction, to Grizzly Bear Coulée. The soil is either clay or clay loam, of a first class quality —*P. R. A. Belanger, 1884.*

South, hilly prairie. Ponds and grass swamps are numerous. Scrub or willows occur on nearly every section. The soil is black loam clay subsoil. Class 1.—*T. Kains, 1882.*

- 50.** *Outlines.*—Forms part of Blackfoot Hills, and is very hilly and knolly in its south-west half. Numerous clumps of poplar, mixed with underbrush, are seen amongst the hills, principally in the east half, where they appear in greater quantity. Numerous ponds and lakes, with good water occur. The soil is clay or clay loam of an excellent quality.—*P. R. A. Belanger, 1884.*

- 51.** *Outlines.*—Is generally undulating or rolling, with the exception of a chain of small hills, about 40 feet high, seen in the east half. There are numerous bluffs of young poplar, principally in the west half, which is mostly covered with an undergrowth of poplar and willows. The soil is generally second class, being sandy loam with sand subsoil, somewhat inferior in the west half. A large swamp, with willows, encroaches in the north-west corner. The Vermillion River enters Section 18 and runs across north-easterly. It is—where crossed by the west boundary—2 chains and 23 links broad, with four feet of water, and a very muddy, soft bottom and slow current. It flows between banks 40 feet high.—*P. R. A. Belanger, 1884.*

- 52.** *Outlines.*—North, Section 36 is much broken by lakes. A small lake is in 35, and two marshes and two lakes in 34; a marsh and a trail in 33. Timber, scattered and small, with much underbrush. The land is of an almost uniformly excellent character. Water fresh.—*W. A. Ashe, 1882.*

Is rolling, but somewhat hilly in the centre. There are bluffs of young poplar and willows, principally in the south half, where they appear in greater quantity. The soil is a clay loam, of first class quality. There is good water everywhere in abundance. A beautiful lake—lying mostly in this township—is crossed by the west boundary of Section 19. It is about two and a half miles long by one mile broad. It appears to be very deep, and flows southeasterly to the Vermillion River. Its water, though not the best is yet fit for use. A large swamp, with thick willows in it, encroaches on the south-west corner, and is from 2 to 4 feet deep, with good water.—*P. R. A. Delanger*, 1884.

- 53. Outlines.**—Is composed of rolling and occasionally hilly land. Along both the east and west boundaries there are some bluffs of poplar and scrub, while the central and southerly sections are generally open prairie. The soil is of good quality, and water is sufficiently abundant for all purposes.—*E. Bray*, 1884.

South, land excellent. Timber scattered and small; a great deal of underbrush. Numerous ponds, lakes and marshes, all containing fresh water.—*W. A. Ashe*, 1882.

- 54. Outlines.**—Varies from rolling to hilly, and is mostly covered with willow or poplar scrub, or bluffs of poplar. Sections 35 and 36 are partly composed of light sand, but the soil of the remainder of the township is either a clay or sandy loam, of good quality. Some lakes, containing good water, were crossed by each boundary line, while others were noticed in the interior.—*E. Bray*, 1884.

- 56. Outlines.**—The Saskatchewan River runs easterly through this township, and divides it into two nearly equal parts. The land along the river is broken by rough and high banks. Generally, south of the river the land is rolling, and of fair quality of soil, and is covered with poplar woods and willow scrub. Along the north side of the river, for a width of about one mile, the land is dotted thickly with bluffs of poplar, and sometimes spruce, while farther north are extensive open tracts of light, sandy land, bordered with belts of poplar, spruce and pine. This description of country does not apply to that at and near the easterly boundary, which is generally fair land, mostly covered with bluffs of poplar and scrub. Some rough land lies in the north-easterly corner of this township, but the remainder is generally rolling.—*E. Bray*, 1884.

North, thickly timbered with poplar and scrub, and with patches of spruce in places. The timber is small, and of little value. The land is poor, very rough and broken, and cut up by ponds, muskegs, &c.—*G. B. Abrey*, 1883.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE VI.

5. *Outlines*.—Going north, on the west boundary, the first two miles is level prairie, covered with sage brush. From thence north it is sandy ridges with clumps of cherry brush. Soil, grey clay throughout. A small creek in Section 31. The east is rolling and undulating. Soil, a hard grey clay, in many places mixed with gravel. In one of the coulées, on Section 24, there is considerable maple, poplar and willow, and some excellent water.—*C. E. Wolf*, 1883.

Along the south boundary, undulating prairie. The soil is dry, stony and “washed out.” Big Timber Coulée is crossed on the eastern half of Section 3.—*O. J. Klotz*, 1883.

6. *Outlines*.—This township is undulating prairie. On Section 1 is a large coulée leading south-west, with two or three smaller ones opening into it. Throughout, the soil is a hard, grey clay, in many places mixed with gravel.—*C. E. Wolf*, 1883.

7. *Outlines*.—Rolling prairie, broken at intervals by coulées, in which there are generally small creeks. Soil, clay or sandy loam. Classes 2 and 3, principally the former.—*J. G. Sing*, 1883.

8. *Outlines*.—The country along the north boundary is broken, but has good sandy loam soil, with good pasture.—*O. J. Klotz*, 1883.

The west is rolling prairie, with two or three coulées in the north. Soil, mostly sandy loam. Class 3 in the north and class 2 in the south. Neither water nor wood. The east is more rough, broken and stony. Piegan Creek crosses the line on Section 1. Soil, black sandy loam. Class 3.—*J. G. Sing*, 1883.

9. *Outlines*.—Southwards, rough ; sandy loam soil ; good pasture.—*O. J. Klotz*, 1883.

A branch of Big Plume Creek flows southward through Section 31. There is considerable wood along its banks, and some scrub in a coulée in Section 19. The general surface is rolling, stony prairie, very much broken eastwards on the northern and southern sections, particularly the former, by hills and coulées. The soil in the east is either clay loam or clay, mixed with gravel or sand, rated class 2, and in the west it is a sandy loam. Class 2 in the south and 3 in the north.—*J. G. Sing*, 1883.

Sub-division.—Hilly, and broken by deep ravines and gullies, in some of which there are scattered poplar trees. The soil is a clay loam, generally class 2, on account of its dryness. Water, generally, is scarce.—*C. C. DuBerger*, 1883.

10. *Outlines*.—Rolling prairie, broken in the south-west by coulées and low hills, which are generally gravelly and stony. The soil along the west line is a sandy loam. Class 3 on the two southern sections, and class 2 on the rest. The line is crossed three times

on the southern half of Section 1 by a creek with scrubby banks. The rest of the line is dry and bare. In the east the soil is chiefly clay or clay and sand. Class 2.—*J. G. Sing, 1883.*

Sub-division.—Rolling prairie, broken by deep ravines, in which there is scattered poplar timber. Surface water is very scarce. Soil, dry clay loam. Class 2. Some of the ravines are 150 to 170 feet deep, but most of the township being rolling, may be settled upon.—*C. C. DuBerger, 1883.*

- 11. Outlines.**—Both west and east of this township is rolling prairie. Soil, sandy loam. Class 2. A creek, at the bottom of a coulée, flows westward across the west line in Section 19. In the east there are some wide valleys containing fine grass.—*J. G. Sing, 1883.*

Sub-division—Generally, rolling prairie. Soil, clay loam, class 1, on subsoil of clay. Several small ponds and marshes occur, but, generally, water is scarce. Water may be obtained by digging, and good crops may be expected under a good tillage and a propitious rainfall.—*C. C. DuBerger, 1883.*

- 12. Outlines.**—The eastern end of the northern boundary lies for about four miles in the valley north of the Saskatchewan. On the west of this there is a narrow clay flat, after which the line passes over a number of deep coulées running into the river from the south. In these coulées soft coal is procurable at a depth of from 4 to 9 feet. The C.P.R. crosses in Sections 35 and 36.—*C. A. Magrath, 1882.*

Rolling prairie, generally, but very broken in the north-east, chiefly by the valleys of the South Saskatchewan and Seven Persons' Rivers, the former passing through Sections 33, 34, 35 and 36, where it crosses the line. Its width is about 13 chains at this point. The line is also crossed here by the Calgary trail and the C.P.R. There is wood in Sections 36 and 25. The soil is chiefly sandy loam, with some gravelly clay in the neighborhood of the Saskatchewan. Rated class 2 on both the east and west of the township.—*J. G. Sing, 1883.*

Sub-division.—The Saskatchewan River enters in Section 33 and courses through 34, 35 and 36. The Canadian Pacific Railway also runs across the north-east corner. North of the river, between the high hills and the river, there is a fine plateau, about 20 chains broad. The south side of the river is very abrupt. The soil is a rich sandy loam, on a subsoil of clay, in the valleys, and sand and gravel in the hills. The Seven Persons' River also runs through this township, over its south-east corner. The water in its standing pools is good. The banks of this so-called river are high and precipitous, and the land on either side is of the best quality. The Fort McLeod trail passes through this township from Section 25 to 19.—*A. F. Martin, 1883.*

- 13. Outlines.**—The country on the west side is level, or gently-rolling prairie. In Section 7 is the South Saskatchewan River, running in an easterly direction in a valley about 300 feet deep, with very abrupt banks. The depth of water was about 3 feet, with very

rapid current. The soil on the south side of the river is sand and gravel, thickly covered with small surface boulders. On the north side, however, it is a good sandy loam, with clay subsoil, and is very suitable for agricultural purposes. Going east, on the north boundary, the soil is a sandy loam, with clay subsoil, for three miles. Further on it gets sandy, and on the east side of this range it is clear sand, almost destitute of vegetation.—*C. E. Wolff*, 1882.

For about three miles along the eastern boundary, going north, the surface is level prairie, and the soil a white clay loam. Class 2. From thence the country is more or less broken by the South Saskatchewan River, and the soil is sandy, and class 4. The river, immediately after entering the township between Sections 13 and 24, turns and flows northward, winding to and fro near the line. There is some poplar wood and scrub in the ravines along the river banks.—*F. W. Armstrong*, 1882.

Sub-division.—The Saskatchewan River enters this township by Section 7 on the south-west, and courses south-east, leaving the township on Section 4. The Canadian Pacific Railway crosses the south-west part from Section 2 to Section 19, where there is a station and telegraph office. A cart trail to Fort McLeod also crosses the township. The south-east is very much broken and hilly, owing to the location of the river, and the soil features are very similar to Township 12 this range, being a good average second class. The even-numbered sections have been squatted upon by settlers, who have broken up small portions of land and have erected log houses with the cottonwood trees in the vicinity. The oats and the root crops seemed to be thriving well, considering the dryness of the season—1883. These settlers were chiefly employed in the C. P. R. construction, and in the coal mines of the Saskatchewan. In the coulées and ravines opening into the river valley seams of coal lignite appear, from 1 to 6 feet thick. This lignite is of superior quality. On Section 7 the Saskatchewan Coal Co. are successfully working mines and hastening means for further and more extended operations. There are remarkable line shows of coal on River Lots 2, 3, 4, 7, 8 and 9 of the left bank, and good terra cotta clay on Lots 1, 2, 3, 4 and 5 of the right bank. Coal seams crop also out on Section 26, and River Lots 18, 19 and 20, on the left bank. The river banks are 200 to 275 feet high. The water is about 10 feet deep and the current about five miles an hour.—*T. Brownjohn*, 1883.

- 14. Outlines.**—On the north and west boundary the country is level or rolling prairie. Soil, clay, loam with clay subsoil. The soil gets sandy near the north-west of the township. For the first three miles, going east, on the south boundary, the soil is sandy loam, with clay subsoil. Further on it gets sandy, and on the east side of this range it is clear sand, almost destitute of vegetation.—*C. E. Wolff*, 1882.

Along the eastern boundary the country is rolling prairie with sandy soil. Class 3. Somewhat stony on Section 36.—*F. W. Armstrong*, 1882.

Sub-division.—Rolling prairie. Soil, sandy loam. Class 2. No wood. There are very few marshes, and only a spring or two of limited supply in the south-east. The soil is rather dry, and the grass and herbage short. Under a favorable rainfall this ought to be a good agricultural township; but if this is not usual, the township is still an excellent one for grazing.—*T. Brownjohn*, 1883.

- 15.** *Outlines.*—North, the country is very undulating; on the other lines, gently undulating. The soil is principally sand in the north, but in some places mixed with gravel. In the west it is somewhat similar, and in the south it is clay loam, with clay subsoil.—*C. E. Wolff*, 1882.

Of the country along the eastern boundary, the northern half is hilly, broken and stony, and the rest rolling prairie. The soil, consist chiefly of a sandy surface, with a hard clay subsoil, is rated class 3.—*F. W. Armstrong*, 1882.

Sub-division.—Rolling prairie, with several heavily-undulating portions to the east centre, the highest rising 150 feet. The soil is a sandy loam, and generally class 2. A good township, with a limited supply of surface water, but no wood whatever. The Saskatchewan River passes within a couple of miles to the east of the township. A small lake occurs on Section 30.—*A. Bourgeault*, 1883.

- 16.** *Outlines.*—Northwards, the country is very hilly and stony, with no water.—*O. J. Klotz*, 1882.

Surveyed west and south. The country is broken, hilly and undulating. The soil is light sand and gravel. Grass is very scarce on the hills, but in low lands there is a good growth. Water scarce.—*C. E. Wolff*, 1882.

Along the eastern boundary the country is generally hilly and broken, with a stony and gravelly surface, and is rated class 3. Section 12 consists of blown sandhills, and is class 4.—*F. W. Armstrong*, 1882.

Sub-division.—Broken and hilly prairie, except southwards, where it becomes gently-rolling and partly level. Soil, sandy loam and gravelly. Classes 2 and 3. The south soil is more loamy, and rests on a subsoil of clay loam. Water is in fair supply and is fresh. No wood.—*A. Bourgeault*, 1883.

- 17.** *Outlines.*—North, west and east; open, rolling prairie. Scanty vegetation. Little or no water, except some meadows, one stretching along three sections on the east line. Soil, class 3—gravel and clay, impregnated with alkali. Stony on the hills.—*L. R. Ord*, 1882.

The country is very hilly and stony in the south, and without water.—*O. J. Klotz*, 1882.

Sub-division.—Rough and broken, and studded with isolated conical hills of from 50 to 70 feet high, the summits of which are crowned with detached rocks and boulders. Soil, generally, poor for cultivation, but might be useful for the growth of forest or fruit trees, which could find a natural shelter from high winds among the hills.—*J. I. Dufresne*, 1883.

- 18. Outlines.**—Surveyed all the boundaries. Open, rolling prairie. Little water. Soil, class 2. Sections 19, 31 and 13 are in valley or bottom land.—*L. R. Ord*, 1882.

Sub-division.—Very similar to Township No. 17 of this Range. A large gully, 80 to 100 feet deep, crosses the township, and numerous lakes and marshes occur, which are generally alkaline. A large lake on Sections 8, 17 and 20.—*J. I. Dufresne*, 1883.

- 19. Outlines**—Surveyed all the boundaries. Open, rolling prairie. Very heavily rolling, and having ravines in the south-westerly two-thirds of the west line. Soil, class 2. Fair, but dry and shallow; gravelly and stony on the hills.—*L. R. Ord*, 1882.

Sub-division.—Mostly open, rolling prairie. Soil, a good sandy loam, on a subsoil of sand and gravel. Classes 2 and 3. It is hilly and broken among the sections of the south-westerly corner, and has generally very little surface water.—*J. I. Dufresne*, 1883.

- 20. Outlines.**—North: surface, prairie, with high rolling hills. Soil, clay. Class 2. Water scarce.—*T. Drummond*, 1882.

West, east and south, open, rolling prairie. Soil, class 2. Fair in the valleys, but boulder-strewn on the hills.—*L. R. Ord*, 1882.

Sub-division.—Open, rolling prairie. Soil, good sandy loam, on a subsoil of sand, and, in places, gravel. Numerous small lakes and marshes, with fresh water, around which farming may be made advantageous. No wood.—*J. I. Dufresne*, 1883.

- 21. Outlines.**—The south half is hilly, the hills being sandy, and covered with stones, while the valleys intervening consist of a mixture of sand and clay. The north-half is better, because the ground, though of the same quality, is undulating, not hilly, and contains fewer stones. This township falls to the Red Deer River, and is perfectly drained to it.—*C. Desjardins*, 1882.

The soil is almost all second class, and the country very rough, as far as the eye could reach from the south boundary.—*T. Drummond*, 1882.

Sub-division.—Rolling prairie, except the south third, which is somewhat hilly, and Sections 26, 27, 28, 33, 34 and 35, which are broken by the bluffs and ravines of the valley of the Red Deer River. Soil, a sandy loam, of classes 2 to 3. Water is scarce in the northerly third, but more plentiful southwards, in fresh ponds and sloughs. No timber, but plenty in the valleys of the next townships. A good cart trail passes through the north-east corner into the valley of the Red Deer River, on which heavy loads may be drawn.—*J. S. O'Dwyer*, 1883.

- 22. Outlines.**—The north consists principally of high rolling prairie, with a sandy loam soil. Class 3, excepting in Section 31, where the surface being hilly and the soil sand and gravel, it is class 4. Water scarce.—*A. F. Cotton*, 1882.

Is better than the townships east and north, on account of its having in its centre a large flat valley of sandy loam, adjoining the Red Deer River on both sides. South and south-west of this valley is a region composed of a mixture of sand, clay and

stones. The river enters into this township between Sections 30 and 19, and leaves it in Sections 1 and 12. It has here a margin of bush and cottonwood trees on the north shore. The valley mentioned forms a good pasture ground. In a creek about one and a-half miles from the western boundary is a vein of coal.—*C. Desjardins*, 1882.

Sub-division.—The Red Deer River runs diagonally across the township in a south-east course, dividing it into two parts, which parts, along with the intervening valley of the river, may be described similarly to the general description of their corresponding continuations in the adjoining township, No. 22, in the 5th Range. A settler has located in the valley, in Section 17.—*J. S. O'Dwyer*, 1883.

- 23.** *Cutlines*.—Is very hilly, both on the east and west sides, while in the centre it is high rolling prairie. On the west side the valley of the Red Deer River is met at the north of Section 7, where the land falls to the river in four steps of about 80 feet high each, with small plateaus between. A great part of these is broken by gullies. The soil is light sandy loam and gravel, with numerous boulders of gneiss and limestone, some being of great size. A few marshes were seen, but only one containing water.—*A. F. Cotton*, 1882.

Sub-division.—North-easterly it is hilly; south-westerly it is broken by the ravines of the valley of the Red Deer River; centrally—the greatest portion—it is rolling prairie. It contains a few sloughs and ponds, and a lake of 80 acres—all fresh. Soil, sandy loam, of 4 to 8 inches deep, on a gravelly subsoil. The loam is darker in the north and lighter southwards. The central portion is adapted for cultivation; the hilly portions for grazing.—*J. S. O'Dwyer*, 1883.

- 24.** *Outlines*.—North, surface generally rough; many boulders on the ridges and knolls. Soil, gravelly and loamy clay, from 10 to 15 inches deep; subsoil, hardened clay and gravel. Very little water; a few small meadows.—*W. Ogilvie*, 1882.

Is high, rolling prairie. The south-east corner is hilly. The soil is sandy loam, with a little gravel; subsoil, white clay. In the northern portion the boulders are not so numerous as on the hilly portion. A few hay marshes were seen. Water very scarce.—*A. F. Cotton*, 1882.

Sub-division.—Hilly prairie all over. Contains numerous marshes and ponds, and three lakes of from 34 to 43 acres in area. Soil, a dark sandy loam, of 4 to 8 inches deep. Class 2. On the hills the soil is gravelly. Owing to its hills, the township is unadapted for agriculture; but from the good supply of water, excellent grass, and shelter afforded by the hills, it is admirable for pasturing cattle.—*J. S. O'Dwyer*, 1883.

- 25.** *Outlines*.—The surface is chiefly undulating. The soil on the west is principally clay loam, averaging about 10 inches in depth, on a clay subsoil. Rated class 2 on Sections 6, 30, 31 and the southern and northern portions, respectively, of 7 and 19. What remains is class 3. Along the east boundary the soil, for the

first one and a-half miles, going north, consists of 8 to 14 inches clay loam, over clay. From thence it is principally sandy loam, averaging about 10 inches in depth, on a subsoil of sand. It is rated class 2 throughout. Water scarce. No wood.—*C. F. Miles*, 1883.

South, surface rough; boulders on the knolls. Soil, gravelly and loamy clay. Water scarce—*W. Ogilvie*, 1882.

Sub-division.—Rolling prairie, except the westerly tier of sections. Sections 21, 20, 28, 29, 32 and 33 are somewhat broken by a deep ravine opening to the south, and containing an extensive marsh. Soil, sandy loam. Class 2, and adapted for tillage. Water is plentiful, but is altogether alkaline. Any quantity of good water may be obtained by digging a few feet in the vicinity of the alkaline sloughs, or at a greater depth elsewhere.—*J. S. O'Dwyer*, 1883.

- 26. Outlines**.—All rolling prairie. In the west, sandy loam soil, about 12 inches, on a sandy subsoil. Class 2. On Section 7, however, and the greater part of 31, the soil consists of clay loam over clay, and on Section 19 the surface is undulating prairie. There is no wood, and very little water. Over to the east side is principally rolling prairie. The soil is clay loam over clay on Sections 12, 13 and 24, and sandy loam over sand on the two northern Sections. Class 2. Section 1 has a surface soil of gravel 7 to 12 inches deep, on a subsoil of sand. Rated class 3.—*C. F. Miles*, 1883.

Sub-division.—Rolling prairie. Section 3 is broken by a ravine. Soil, a hard sandy loam, of about 8 inches deep, on a subsoil of clay, which contains a small proportion of alkali, especially in the central sections. Class 2. Water is plentiful, but altogether alkaline. Four lakes have a combined area of 335 acres. This is a good township for agricultural purposes, if plenty of water can be got by digging a few feet, and of which there is not much doubt.—*J. S. O'Dwyer*, 1883.

- 27. Outlines**.—The west is principally high-rolling prairie, with occasional knolls on the northern and central sections. The soil is clay loam. Class 2 everywhere, except on the adjoining portions of Sections 18 and 19, where it is class 3. There is quite an extent of marsh on the last named section, and two or three sloughs on Section 30; but, generally, water is scarce. Excepting Section 36, which is rolling prairie, the country along the east boundary is broken and knolly. The soil is about equally divided between clay loam over clay, in the north, and sandy loam over sand, in the south. Class 2 generally, but class 3 on Section 13, half of Section 1, and portions of 24 and 25. There is no wood and scarcely any water.—*C. F. Miles*, 1883.

Along the south boundary is principally rolling prairie, with sandy loam soil on a clay subsoil. Class 3. There is some water on Sections 3 and 6. No wood.—*J. S. O'Dwyer*, 1883.

- 28. Outlines**.—North, rolling and undulating. Soil, clay loam, class 1, and good farming land. Water abundant. No wood.—*T. Fawcett*, 1883.

The country is principally rolling prairie, class 2. Sections 19 and 30, however, are undulating, and class 1. The soil, throughout, is a clay loam, 10 to 18 inches, on a clay subsoil. There is some water on portions of Sections 6, 1, 36 and 30, but generally there is little.—*C. F. Miles*, 1883.

- 29.** *Outlines.*—South, rolling prairie, with numerous lakes and marshes.—*T. Fawcett*, 1883.

Along the east boundary the surface is rolling prairie. Soil, generally sandy loam, about 8 inches deep, on a clay subsoil, class 2, but there are a few places where it is clay loam or sticky clay. It is class 1 on the adjoining portions of Sections 25 and 36, and class 3 on the northern half of 24. One or more ponds or marshes occur on every Section, except 25. There is no wood.—*F. W. Wilkins*, 1884.

Along the west boundary is rolling prairie. Soil, clay loam over clay. The southerly two-thirds is class 1; but on the adjoining portions of Sections 30 and 31 is an alkaline valley, nearly a mile wide, and class 3. The semi-sections bordering on this flat are rated class 2. There is no wood, and on the northern sections no water; but several small ponds occur in the south. The trail from Red Deer Forks to Edmonton is crossed on Section 18.—*J. K. McLean*, 1884.

- 30.** *Outlines.*—Westwards, rolling prairie, with a clay loam soil on a clay subsoil. Class 2. In Sections 6 and 7 is an alkaline flat, nearly one and a-half miles wide, in which is a small creek flowing east, the water of which is only slightly alkaline. There are also a couple of small ponds in Section 31, but, on the whole, water is scarce. There is no wood.—*J. K. McLean*, 1884.

Along the east boundary the country is principally rolling prairie, with a sandy loam soil. Class 1 on Section 36 and the northern half of 24, and class 3 on the northern portions of Sections 12 and 25, the former of which is somewhat broken and extremely stony. The latter lies in a valley. Elsewhere, the land is class 2, excepting Section 13, where, being hilly, and broken, and gravelly, it is class 4. Sounding Creek crosses this section. No wood.—*F. W. Wilkins*, 1884.

- 31** *Outlines.*—West, rolling prairie, without wood and with little water. The alluvial soil is principally sandy loam, 6 inches deep, on a subsoil of sand or clay, but on the first one and a-half miles going north it is clay loam over clay. The land is rated class 2 throughout.—*J. K. McLean*, 1884.

Along the east the surface is rolling prairie, and the soil principally sandy loam, 9 inches deep, on a clay subsoil. Class 2.
F. W. Wilkins, 1884.

- 32** *Outlines.*—The country along the north boundary consists of level prairie in the east and gently-rolling prairie in the west, with a clay loam soil, varying in depth from 4 to 12 inches, on a clay subsoil. It is rated class 2, excepting on Sections 31 and 32, where the greater depth of alluvium occurs, and it is classed 1 and 2. A large lake lies immediately south of the line, on the adjoining por-

tions of Sections 34 and 35, and a small lake is crossed on the western half of Section 31. There is no wood.—*E. Bray*, 1883.

West, rolling prairie, with a shallow pond on each section. The majority of these ponds are fresh. There is no wood. The soil is principally sandy loam over sand. Class 1.—*J. K. McLean*, 1884.

Along the east boundary the surface is rolling prairie, and the soil principally sandy loam, with, generally, a clay subsoil. The land is rated class 2, excepting the first one and a-half miles, going south, where it is class 3. Water is scarce, and there is no wood.—*F. W. Wilkins*, 1884.

- 33. Outlines.**—West, rolling prairie. Shallow ponds of fresh water occur at intervals on the first four and a-half miles going north. In the north of Section 18 is an alkaline valley and creek. There is no wood. The soil is generally clay or clay loam, though there are occasional stretches of sandy loam, the depth varying from 4 to 12 inches. The land is rated class 1 everywhere but in the vicinity of the valley.—*J. K. McLean*, 1884.

Along the east boundary, rolling prairie, having a soil of sandy or clay loam, with, generally, a clay subsoil. Class 3. There is marsh land on parts of Section 24. There is a small stream flowing north-west on Section 36.—*F. W. Wilkins*, 1884.

Level in the south-east and gently-rolling in the south-west. Alluvial soil, clay loam, 4 to 12 inches deep; subsoil, clay. Class 2, excepting on Sections 5 and 6, where it is 1 and 2. The line crosses a small lake on Section 6 and there is also some water on Section 2. There is no wood.—*E. Bray*, 1883.

- 34. Outlines.**—West, rolling prairie. Shallow ponds, most of which are fresh, occur at intervals. In the north of Section 31 is a small alkaline valley, with a creek flowing east. Soil, sandy loam, over clay. Class 2. There is no wood.—*J. K. McLean*, 1884.

Along the east boundary the surface is generally rolling prairie, but at one and three-quarter miles from the south is a valley about 150 feet deep and one mile wide, with very steep and stony sides, and a small creek. Some good wood is scattered throughout the valley. In the south of Section 24 is a deep ravine, and about a mile further north is another. In each of these is a small stream flowing east, and in the former there is some wood. The quality of the land is as follows: South of the large valley, class 1; north of it, class 2, and in it classes 3 and 4, the soil being a sandy loam throughout.—*F. W. Wilkins*, 1884.

- 35. Outlines.**—Along the west boundary the surface is rolling prairie. On the northern half of Section 30 is a small alkaline lake. Fresh water is scarce, and there is no wood. The alluvial soil is alternately sandy or clay loam, and the subsoil clay. Class 1.—*J. K. McLean*, 1884.

The country east is sandy loam throughout. Sections 1; 25, 36, and the southern half of 24, rolling prairie; class 2; the remaining sections are broken and hilly, and class 3. A stony valley, about 150 feet deep, embraces the entire width of Section

12, and at the bottom of it is a winding creek flowing east. There is also a small stream in a shallow ravine on Section 1, and on the northern and central sections are a number of marshes. There is no wood.—*F. W. Wilkins*, 1884.

- 36.** *Outlines.*—North, Sections 36 and 35 are hilly and broken, the former by a number of wooded ravines, and the latter by ravines, not wooded, in one of which is a creek flowing south. Along the next three miles the country consists of rolling prairie, with a few ponds and grass swamps. Section 31 is very hilly prairie, with numerous deep ponds and grass swamps. Soil, principally sandy loam, 3 to 6 inches in depth, on sandy subsoil. Rated class 2 from Section 34 to the middle of 32, inclusive, class 3 on the east of this, and class 1 on the west.—*T. Kains*, 1883.

Along the west boundary the surface is rolling and hilly prairie. On Section 18 is an alkaline lake. Shallow ponds of fresh water occur at intervals in the southerly half. The soil is sandy loam and the subsoil clay; but occasionally the order is reversed. The land is rated as follows: Sections 6, 7, 30, and the north of 18, class 1; Sections 19 and 31, class 2; and the south of 18, class 3. There is no wood.—*J. K. McLean*, 1884.

Along the east boundary, going south, the second half of the first mile spans a deep ravine, heavily wooded with poplar, up to 10 inches in diameter, at the bottom of which is a small creek. A little beyond this is a body of very saline water, called Gooseberry Lake. About midway on Section 12 the north shore of Round Lake is reached. Its water is somewhat brackish. Generally speaking, the country is broken, hilly and stony, with a sandy loam soil. It is rated classes 3 and 4, except Section 24—class 2.—*F. W. Wilkins*, 1884.

- 37** *Outlines.*—South-east, hilly, and broken by wooded ravines. The remainder of the country along the line is rolling prairie, excepting Section 6, which is very hilly. Soil, sandy loam, on a sandy subsoil, with a few intervals of clay loam over clay. Rated classes 1, 2 and 3.—*T. Kains*, 1883.

Fully half of the area of this township is composed of the Neutral Hills, which cross it in a north-westerly direction from the south-east corner. Their southern slope is rolling and open, with hard sandy loam soil and some scattered stones. These hills are about 200 feet above the level of the country to the north, and are broken by numerous ravines and coulées, with a small quantity of poplar on the north exposure of some of them. There is good pasturage about the few sloughs and ponds lying in the hollows. In the north-west the surface is open, dry and rolling, with a light sandy loam soil. The easterly portions contain a small quantity of poplar and some large ponds. The soil is sandy. The classification varies from 2 to 4.—*J. F. Garden*, 1884.

- 38.** *Outlines.*—The southerly portion of this township has a rolling surface, which rises to the north, becoming hilly and broken, some of the valleys being 150 feet deep. The westerly portion is open, but there are scattered poplar and willows in the easterly part, and near the north-east corner it is covered with thick bush.

Scattered stones and gravel were noticed on many of the hills and ridges, which have a poor growth of grass. There is good grazing about the numerous ponds and sloughs in the hollows. The class is from 3 to 4.—*J. F. Garden, 1884.*

- 39. Outlines.**—Ribstone Creek—having a badly defined channel—flows with a sluggish current, in a north and north-easterly direction, to Battle River, through an almost impassable slough or marsh, varying in width from 10 to 30 chains, which is situated in the west part of this township. In the north-west corner it joins a small lake. The greater part of the township is open, rolling or hilly, except in the south-east part, where a rather large quantity of poplar is growing among sand ridges, which are from 20 to 40 feet in height. There is a small lake in Sections 13 and 24, and in the same vicinity are several alkali bottom lands. The soil is light sandy loam, or sand, and classed from 2 to 4.—*J. F. Garden, 1884.*

- 40. Outlines.**—North, a sluggish stream, about $1\frac{1}{2}$ chains in width and 2 feet deep, called Ribstone Creek, flows eastwardly through Sections 35 and 36. East of the creek is a low flat, covered with water. West of it the country is principally rolling, with scattered bluffs of poplar and clumps of willow, sometimes in water. A couple of lakes, one of which occupies the greater part of Section 33, and in the west a few ponds and marshes. Soil, generally black loam, about 5 inches deep, on a sandy subsoil. Class 1. On Section 36 and a part of 35 it consists of white clay, and is rated class 2.—*C. A. Magrath, 1883.*

The marsh bordering Ribstone Creek extends into this township in the south-west part, two and a-half or three miles. The creek leaves it at its northerly end, in a well-marked channel of about 20 feet in width. The depth of the water is about 2 feet, with a rather rapid current, and is of good quality. The country is high and broken along the westerly boundary, and contains a little poplar, some of the trees being 8 inches in diameter. Ground cedar is also to be found here. Some poplars grow along the eastern boundary, but the central and greater portion of the township is open. Numerous ponds, and some alkaline bottom lands, are scattered through the township. One of the ponds or lakes is situate in Section 30, and another in Sections 1 and 12. The soil varies from black loam in the west, to sand in the east, and classes from 2 to 4.—*J. F. Garden, 1884.*

- 41. Outlines.**—Ribstone Creek runs northerly through the eastern part, leaving the township in Section 25, the land, immediately to the west being rolling and open, and to the east hilly, with poplar. The surface along the west boundary is undulating or rolling, with a large quantity of poplar and willows, some of the trees being 8 inches through, and suitable for building purposes. Excellent pasturage in the hollows about the ponds, and among the poplar clumps. The soil varies from a rich loam to a sandy loam in the west, classes 1 to 3, to sandy in the east, classes 3 to 4.—*J. F. Garden, 1884.*

South, Ribstone Creek crosses Sections 1 and 12, and continues northward through this township. The country in the east is principally wet and rolling prairie, with scattered bluffs of poplar. In the west it is dryer, with a few small ponds and marshes. Soil, generally black loam. Class 1.—*C. A. Magrath, 1883.*

42. Outlines.—Ribstone Creek enters this township in Section 12, and runs north-west and north, through marshes and muskegs, with willows. The easterly portion is broken by sand ridges, with a large quantity of poplar. Classes 3 to 4. A good sized lake enters the township in Section 24. In the south-west the surface is rolling or hilly, with poplar up to 8 inches in diameter, willows and numerous sloughs. The soil is loam or sandy loam, and class 2. The north-west part is broken by low sand ridges, with poplar and willows. Few sloughs, and a sandy soil, class 4.—*J. F. Garden, 1884.*

43. Outlines —Ribstone Creek passes north-easterly through the south-east corner, leaving it in Section 12, being bordered by a broad muskeg, with willows and rank grass. The easterly part of the township is broken by sand ridges, hills and lakes, one of the latter partly in Section 25, being from 2 to 3 miles from east to west, and surrounded by high land, thickly wooded with poplar. Some of the ridges are very steep and abrupt, from 25 to 40 feet high, with bush only on the north slopes. In the west part the surface is either hilly or rolling, with scattered clumps of small poplars and willows. A good many sloughs are located here, with luxuriant grazing about them and among the clumps. In the north-west a valley extends east and west, with bush, large ponds and sloughs. The soil is a sandy loam, and classes from 2 to 3.—*J. F. Garden, 1884.*

44. Outlines.—The surface is rolling on the two western sections and undulating on the rest. There is a growth of grey willows and small poplar scattered over it, except on the first mile and a-half going west, which is open prairie, with alkaline spots. Swamps, ponds and marshes occur at intervals along the line, and in the eastern half of 32 is a small running stream of good water. Soil, sandy or clay loam, chiefly the latter, on a clay subsoil. Class 1.—*T. Kains, 1883.*

Has generally an undulating or rolling surface, with scattered poplar and willow sloughs. The soil is loam or sandy loam, and classes 2 to 3. The best land lies in the easterly portions.—*J. F. Garden, 1884.*

45. Outlines.—Is undulating, with many ponds and lakes. Poplar bluffs are numerous. A lake encroaches on the north-east corner. Soil, first class.—*J. J. McArthur, 1883.*

Along the south boundary the surface is rolling and undulating. Swamps, ponds and marshes occur at intervals. On Section 5 is a small running creek. Soil, sandy or clay loam, chiefly the latter. Class 1.—*T. Kains, 1883.*

46. Outlines.—From the south-west corner, Battle River runs north along the west boundary, and then north-east. A lake encroaches

on the south-east corner. The interior of the township is undulating, with many swamps and ponds, and interspersed with bluffs of dry and green poplar. Soil, first class.—*J. J. McArthur*, 1883.

47. Outlines.—Battle River crosses the south-east corner. A large lake extends through the interior. The remainder is very undulating, and interspersed with bluffs of dry and green poplar. Soil, first class.—*J. J. McArthur*, 1883.

48. Outlines.—North, in the east of Section 36 is a wooded valley, called Grizzly Bear Coulée, with a stream of good water. West of this the country, to the end of the mile, is rolling, with a few swamps, and patches of willow and poplar scrub. The next three sections consist of hilly prairie, with a few ponds and swamps, and numerous poplar bluffs and patches of scrub. In the west of Section 33 is a lake which extends into 32. The country west of the lake is almost entirely covered with heavy poplar and dense underbrush. It is hilly along the first mile, and from thence to the end of the line, rolling. Soil, black loam, averaging about 10 inches in depth, with clay subsoil. Class 1.—*T. Kains*, 1882.

In the south part is a lake. The north-west portion is, in places, heavily timbered. The remainder is very undulating, and interspersed with bluffs of dry and green poplar. In the neighborhood of Grizzly Bear Coulée, which crosses the north-east corner, the soil is of an inferior quality.—*J. J. McArthur*, 1883.

49. Outlines.—Is hilly, and timbered in the west half, the timber increasing in extent in the western tier of sections, which are entirely covered with poplar, willows and dry wood, generally suitable for all purposes. The eastern half is mostly prairie, with a few patches of willows and small clumps of young poplar. Grizzly Bear Coulée runs through this township south-easterly from its north-west corner. The soil rates first and second class. It is considerably broken by deep ponds, marshes, sloughs and lakes.—*P. R. A. Belanger*, 1884.

In the south-east the country is rolling, with a few swamps and patches of poplar. West of this it is hilly prairie, with numerous poplar bluffs. At the west end of the line, rolling. Soil, black loam. Class 1.—*T. Kains*, 1882.

50. Outlines.—The country is hilly, broken by large ponds and lakes and interspersed with bluffs of poplar, willows and dry wood. The timber is generally fit only for fuel and fencing. The soil is sandy loam, with sand subsoil, and ranks first and second class.—*P. R. A. Belanger*, 1884.

51. Outlines.—Is a rolling country, interspersed with bluffs of poplar increasing in extent in the north-east quarter, which appears thickly covered. A large belt of timber was seen all along the bank on the south shore of Vermillion River, which runs through the south half. This river enters the township in Section 6, is about 1 chain broad by 3 feet deep, with a sandy bottom, and runs across the correction line for a mile or two, finally leaving in Section 13. A chain of small hills appears in the south-west quarter, on the north bank of the river, extending from centre of

the township towards the west boundary. Large quantities of good hay may be cut in the valley on both sides of the river. The soil ranks first and second class, and is sandy loam, lighter in the neighborhood of the north side of the river.—*P. R. A. Belanger*, 1884.

- 52.** *Outlines.*—Along the north boundary the surface is hilly, and the soil sandy loam, on a sandy subsoil. On the western portions of Sections 31 and 32, where the alluvial soil is 18 or 20 inches deep, the land is class 1, but elsewhere it is rated class 2. Small lakes and ponds of good fresh water, and bluffs of poplar, generally of good size, occur all along the line.—*W. A. Ashe*, 1882.

The country is heavy-rolling, and interspersed with numerous bluffs of poplar in its centre, and in the south-east quarter, where it becomes thick bush on Sections 1 and 2. A large lake is crossed by the east boundary of Sections 24 and part of 25. Another lake or swamp, with willows, encroaches on the south-east corner. There is a plentiful supply of good water in numerous ponds. The soil ranks first class, and is a clay or clay loam in the north half, and a sandy loam, with clay subsoil, in the south half.—*P. R. A. Belanger*, 1884.

- 53.** *Outlines.*—Along the south boundary the land is generally of an excellent character. Good water is abundant. A few poplar bluffs occur all along the line.—*W. A. Ashe*, 1882.

Some of the northern sections are rough and hilly, while the remainder is composed of rolling land. Some open country was seen, but the greater part is covered with scrub and bluffs of poplar and willow. Good water can easily be found in lakes or ponds, while the soil is good, and pasturage in open land is excellent.—*E. Bray*, 1884.

- 54.** *Outlines.*—Is composed of rolling, rough and hilly land, mostly covered with scrub or woods of poplar, the latter being usually on the north slope of hills. Lakes and ponds of good, fresh water are abundant. Small openings occur in many localities, on which the pasturage is excellent, thus indicating a good rich soil.—*E. Bray*, 1884.

- 56.** *Outlines.*—North, timbered with poplar and scrub, but the timber is small and of little value. The land is broken and the soil poor.—*G. B. Abrey*, 1883.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE VII.

5. *Outlines*.—Lake Pakoghkee occupies the south-west. The country north of the lake, consists of undulating prairie, with sand ridges, and a soil of white sand. On the east boundary, the surface is generally level and the soil grey clay; in the south-east, overgrown with sage bush, and in the centre and north-east, drifted, with sandy ridges, and having clumps of cherry.—*C. E. Wolff*, 1883.

Along the south boundary the country is a level clay and sage-bush flat, and is the beginning of the so-called bad lands. The south-west of the township is submerged by Lake Pakogh-kee. There is no wood.—*O. J. Klotz*, 1883.

6. *Outlines*.—Undulating and level prairie, with gravelly ridges and surface stones. The soil south-westward consists of white sand. Elsewhere it is a sandy loam, on a sandy clay subsoil.—*C. E. Wolff*, 1883.

7. *Outlines*.—Rolling prairie, broken in the west only by the valley of Peigan Creek, on Section 19, and in the east, at intervals by coulées, in which there are generally small creeks. Soil, sandy or clay loam. Classes 2 and 3—chiefly the former.—*J. G. Sing*, 1883.

8. *Outlines*.—Rolling prairie. Gravel and sand in the north-west, and gravelly loam on the south-west. Class 2 throughout, and very dry. In the east, sandy loam. Class 3 in the north and class 2 in the south.—*J. G. Sing*, 1883.

The south is rolling prairie, well watered, and soil of good quality.—*O. J. Klotz*, 1883.

9. *Outlines*.—Rolling prairie, stony in places, and broken in the east, at intervals, by coulées. A branch of Big Plume Creek meanders southward through Section 36, with some timber along its banks. Soil, sandy loam. Class 2 in the south-east and class 3 in the north-east; and in the west, for the most part, gravelly, rated class 3 in all the sections, except 6, 7 and 31, in the first and last of which it is sandy or sandy loam.—*J. G. Sing*, 1883.

Sub-division.—A deep valley traverses this township through Sections 30, 32 and 33. Southwards, the land is highly-rolling and an excellent soil of clay loam. Classes 1 and 2. Elsewhere—excepting some gravelly and sandy parts—it is a sandy loam, generally class 2. Several creeks—dry in summer—permeate the township. In some places their banks rise 100 to 150 feet high. Water is generally scarce. A luxuriant hay meadow occurs in Section 31—*A. F. Martin*, 1883.

10. *Outlines*.—Rolling prairie, broken in the south-east by hills and coulées, which are generally gravelly and stony. Soil, sandy

loam. Class 3 in the south-east and class 2 in the north-east, and all of the west, except Section 31, which is poor and gravelly. The east line is crossed three times in Section 1 by a creek, but elsewhere along the line the country is dry and bare. The interior of the township is watered by tributaries of the Seven Persons' River.—*J. G. Sing*, 1883.

Sub-division.—Sections 2, 3 and 4 are hilly, but the remainder is a level prairie, with a rich clay loam of the finest quality, and highly adapted for agricultural purposes. Both branches of the Seven Persons' River enter the township, and although they diminish in volume during the summer, yet contain plenty of fresh water in the pools. The banks of the river are deeper and more abrupt towards the north part of the township.—*A. F. Martin*, 1883.

- 11. Outlines.**—Rolling prairie. Soil, sandy loam in the north, west and the east, sand and gravel in the central west, and light clay in the south-east, all rated class 2. The McLeod trail crosses Section 31, and a creek Section 24.—*J. G. Sing*, 1883.

Sub-division.—Rolling and undulating prairie. Soil, generally clay loam on clay subsoil. Class 1. The east and west branches of the Seven Persons' River run along Sections 2 and 3, and out at Section 13, in a valley having very high and precipitous banks. The water is good. The land in the southern portion of the township is class 1, and that in the northern part is lighter, although good—nearly class 1.—*A. F. Martin*, 1883.

- 12. Outlines.**—Section 36 is cut up by coulées, which run back one and two miles from the river. In 33 the line crosses the river, west of which, 31 and 32 are level prairie. The soil throughout is sandy loam.—*C. A. Magrath*, 1882.

Rolling prairie, except Section 30, occupied by the South Saskatchewan River and valley, in which are numerous coal banks, coulées, &c. Section 19 is also somewhat broken by hills and coulées. Soil, sandy loam. Class 2 on all, except Sections 30 and 19, which are clay, and clay mixed with stone and gravel, classes 3 and 4. The McLeod trail crosses the east line on Section 24.—*J. G. Sing*, 1883.

Sub-division.—The Saskatchewan River runs through the north-west corner of the township, through Sections 29, 30, 32 and 33. The Fort McLeod trail also crosses the township. A deposit of coal occurs on the river, where a shaft 80 feet deep has been driven, and a 6-foot bed or seam has been found. There are several other locations on Sections 29 and 30 containing seams of coal. About the river the land is broken, and generally it is a good sandy loam, on a subsoil of clay; but water is very scarce in the south.—*A. F. Martin*, 1883.

- 13. Outlines.**—North and west is rolling prairie, without water or wood. The soil is a grey clay, with blueish white clay subsoil. The grass is very short.—*F. W. Armstrong*, 1883.

East, the country is level or gently-rolling prairie. In Section 7 is the South Saskatchewan River, running in a valley about 300 feet deep, with very abrupt banks. The depth of water was

about 3 feet, with a very rapid current. The soil on the south side of the river is sand and gravel, thickly covered with small surface boulders. On north side, however it is a good sandy loam, with clay subsoil, and is very suitable for agricultural purposes.—*C. E. Wolff*, 1882.

From the south-east corner the south line crosses many cou-
lées, and then the Saskatchewan River in Section 4, after which
Sections 5 and 6 are level prairie, with a sandy loam soil.—*C. A.
Magrath*, 1882.

Sub-division.—Generally undulating. Soil, clay loam, of 3
and 4 inches, on clay subsoil. Classes 1 and 2. The River Sas-
katchewan traverses the south-east from Section 4 to the boundary
of 12 and 13, and has steep banks, with deep intersecting ravines,
which break up the south-east of the township very much. The
river is navigable for steamers of light draft, and is from 800
to 1100 feet broad, with a moderate current. The C. P. R. crosses
the north-easterly part of the township. No wood.—*J. Warren*,
1883.

- 14. Outlines.**—North is undulating. Soil, a dry sand and clay loam,
with a good clay subsoil. Surface water scarce. East, level or
rolling prairie. Soil, clay loam, with clay subsoil, with sand near
the north-east.—*C. E. Wolff*, 1882.

South and west, rolling prairie. Soil, grey clay, with clay
subsoil. Gravelly in places. Grass very short; water scarce.—
F. W. Armstrong, 1883.

Sub-divison.—Generally undulating, with a few watercourses
traversing and breaking the surface, but without water in them.
The soil is very light in the north part, and in the south part the
loam, though better, is shallow. The C.P.R. crosses Sections 5, 6
and 7 (Bowell Station). No timber. Water scarce.—*J. Warren*,
1883.

- 15. Outlines.**—The soil is sand and gravel, in many places thickly
strewn with small boulders, until close to the south boundary,
where it turns to a loam, either of sand or clay over a good clay
subsoil. The country is very dry, it being almost impossible to
find surface water.—*C. E. Wolff*, 1882.

Sub-division.—Level prairie, generally sloping, north-west-
wardly. The soil in the south is rather dry and sandy. Classes 2
and 3. Northwards it becomes more loamy, lies on a clay subsoil,
and ranks classes 1 and 2. Water is in fair supply, and is fresh.
Marshes are more abundant in the north, and a lake occurs on
Section 34, slightly alkaline. No wood.—*A. Bourgeault*, 1883.

- 16. Outlines.**—North, is hilly, dry and baked, furnishing very poor
feed.—*O. J. Klotz*, 1882.

East, the country is in turn very broken and hilly, then undu-
lating. The soil is a light sand and gravel. Grass is very scarce
on the hills, but in low lands there is a good growth.—*C. E. Wolff*,
1882.

Sub-division.—Broken and hilly prairie. Soil, generally a
sandy loam, on a clay and sand subsoil. Classes 2 and 3. Fresh
water is in fair, but not plentiful supply, and there is no wood

whatever. Many alkali marshes are to be found in the flat bottoms of the ravines. The tops of the hills are generally cone-shaped, and very stony. There is an alkali valley running through the centre, north-west and south-east.—*A. Bourgeault*, 1883.

- 17. Outlines.**—Open, rolling prairie. Soil, classes 2 and 3. Dry, sandy and stony; scanty vegetation.—*L. R. Ord*, 1882.

South, is hilly, dry and baked, with poor grass.—*O. J. Klotz*, 1882.

Sub-division.—Rolling westwards; undulating eastwards. Soil, sandy loam. Class 3 in the west, and a shade better in the east. There are numerous sloughs and marshes, except in the north and east, where the water is rather scarce. No wood.—*P. Gosselin*, 1883.

- 18. Outlines.**—Open, rolling prairie. Scanty vegetation. Soil, class 2. Dry and shallow, with sandy and stony patches.—*L. R. Ord*, 1882.

Sub-division.—Rolling prairie, somewhat hilly in the east. Numerous fresh-water sloughs and some alkaline ponds lie in the north-east and north. The soil is stony in the east, but is a good sand loam westwards, with some sections of clay loam, and rates classes 2 and 3. It is well suited for farming in the west, and for grazing eastwards. No wood.—*P. Gosselin*, 1883.

- 19. Outlines.**—Open, rolling prairie. Soil, class 2; fair, but shallow and gravelly in places. A few saline ponds. There is a valley on Sections 34 and 35.—*L. R. Ord*, 1882.

Sub-division.—Partly hilly and partly rolling prairie. The hilly portion occupies the east. Soil, clay loam in places, and sandy loam on subsoils of clay and sand. Classes 2 and 3. There are numerous sloughs of water, which are fresh, and a few which are alkaline. No wood or running streams. Generally the township is fairly suited for farming.—*P. Gosselin*, 1883.

- 20. Outlines.**—North, prairie, with high rolling hills. Clay soil; class 2. A small alkaline lake in east of Section 33. Neither good water nor wood.—*T. Drummond*, 1882.

South, open, rolling prairie. Soil, classes 2 and 3; fair, but gravelly in places, and on most of the hills. Saline lake, about 80 chains long, in Sections 2 and 3.—*L. R. Ord*, 1882.

Sub-division.—Heavy-rolling prairie. Soil, sandy loam, gravelly in many places; class 3, on sandy subsoil. A fresh-water lake occurs in Sections 2, 3 and 10, of 175 acres. There are some alkaline ponds and numerous marshes throughout the township, which is fairly suited for farming in places where the soil is not too sandy. No wood.—*P. Gosselin*, 1883.

- 21. Outlines.**—The western part of this township is hilly and broken prairie, with numerous alkaline ponds. The soil is sandy loam and gravel.—*A. F. Cotton*, 1882.

North, undulating prairie, with numerous sandhills. The soil is light, and is generally a mixture of sand and clay. Class 3. Sections 31 and 32 are sand and stones. Along the east boundary the surface is undulating and hilly, and the soils and, mixed with clay. No wood or water.—*C. Desjardins*, 1882.

In the south it is clay soil, class 2. A couple of small lakes in east of Section 4. Wood and water scarce.—*T. Drummond*, 1882.

Sub-division.—Rolling prairie. Soil, sandy loam, on a sandy subsoil, and generally class 2. The township is not well suited for farming purposes. There are several small ponds or small lakes, and a number of marshes, throughout the township. There is no wood.—*C. P. Aylen*, 1884.

- 22. Outlines**.—The Red Deer River leaves this township on Section 25, and is at this point about 96 rods wide. It has a swift current, shifting sand bars, numerous wooded islands and, frequently, a margin of willows, poplar and cottonwood trees. The river valley is a good pasture ground, the soil being sandy loam; but elsewhere the land is poor, consisting of a mixture of sand, clay and stones.—*C. Desjardins*, 1882.

Along the north and west boundaries, hilly prairie, with a soil of sandy loam and gravel. The Red Deer River flows southward across Sections 35 and 36. There is a very small quantity of wood on the river banks. A creek, which starts from a small lake immediately west of Section 6, winds to and fro along the west line, as far as Section 31.—*A. F. Cotton*, 1882.

South, undulating prairie, with numerous sandhills. The soil is sand and clay, class 3; but on Sections 5 and 6 it is only sand.—*C. Desjardins*, 1882.

Sub-division.—Rolling prairie. Soil, sandy loam—class 2—on a sandy clay subsoil. There are a number of marshes, particularly in the south-west. The Red Deer River runs across the north-east corner, and in the vicinity are some bushes of poplar and cherry trees suitable for fuel. The north and north-eastern portions are hilly.—*R. J. Jephson*, 1883.

- 23. Outlines**.—Surveyed all boundaries of this township. Hilly prairie, with a very hard sand loam and gravel soil. The southern half of this township is very much broken by deep gullies running into the Red Deer River, which enters on Section 6. Here, on the north bank, there is a small quantity of wood, and its width at this point is 88 rods. Looking eastward, down the river, some sandhills were observed. On Section 7 are small hills covered with gravel and boulders. Section 19 is almost level, but 30 and 31 have a very broken surface. Section 18 is an alkaline flat. There is no wood, except in a few places along the river, principally on Sections 1, 2, 3, 9 and 10.—*A. F. Cotton*, 1882.

Sub-division.—Hilly, especially in the southern half, which is permeated by numerous deep gullies running into the valley of the Red Deer River, which is about two miles broad. On Sections 7, 8, 17 and 18 an alkaline flat occurs. The soil is generally a sandy loam—class 2—and somewhat stony in the western part of the township, with some very large granite boulders on the hilly places. This township will make a good grazing township, but is rather rough for farming.—*R. J. Jephson*, 1883.

- 24. Outlines**.—North, surface much broken by knolls and ridges. Soil, generally light sandy loam, from 10 to 15 inches deep. Subsoil,

hard clay. Very little water ; some small meadows.—*W. Ogilvie*, 1882.

West, east and south, high, rolling prairie, with a few gullies and a very few marshes, of which the only ones seen containing water were on the western tier of sections. On Section 19 is a pond of good clear water. Soil, sandy loam and gravel, very hard. Subsoil, white clay.—*A. F. Cotton*, 1882.

Sub-division.—Hilly prairie. Soil, sandy loam, gravelly and poor, on the hills, but having a luxuriant growth of grass in the bottoms. The rating is generally class 2, and fresh water is in fair supply in the marshes. No wood. *R. J. Jephson*, 1883.

- 25. Outlines.**—Rolling and broken prairie, with sandy and clay loam soil. Marsh on middle of Section 6. Water generally scarce.—*W. Ogilvie*, 1882.

The surface is usually undulating, and the soil a clay loam, 10 inches, on a clay subsoil. Class 2 in the west, the north-east and south-east, and 3 in the central east. A couple of trails leading to the Forks of the Red Deer River cross the western boundary.—*C. F. Miles*, 1883.

Sub-division.—Eastern half, hilly ; western half, rolling. Sections 26, 27, 34 and 35 are largely broken by a large lake and some smaller attached ones. Section 22 is broken by an alkali lake, and 10 by an alkali marsh. Soil, dark, sandy loam, 6 to 12 inches in depth, on a gravelly subsoil in places, and clay in others. All the lakes are fresh, those on Sections 22 and 35, being quite large. This is a fair township for settlement.—*J. S. O'Dwyer*, 1883.

- 26. Outlines.**—Surveyed the west and east boundaries. The country is rolling and the soil, generally, sandy loam, 12 inches deep, and class 2. In some parts it is, however, a clay loam, particularly in the west and north-east. In Section 12 this clay loam is somewhat alkaline in a flat trending to a lake in the south-west of the section. Surface water is fairly distributed, but is more plentiful in the southwest half of the township. West boundary and the west is principally hilly prairie.—*C. F. Miles*, 1883.

Sub-division.—Rolling prairie, with a large quantity of surface water, all fresh. Soil, sandy loam, 10 inches deep, and class 2. It overlies subsoils of gravel and clay or a mixture of both. This township is well adapted for either agriculture or grazing, as the soil is good and the grass and water excellent. A cart trail passes over the south-eastern corner.—*J. S. O'Dwyer*, 1883.

- 27. Outlines.**—High, rolling prairie, with some ponds and knolls. Soil, clay loam, with clay subsoil. Rates first and second class.—*C. F. Miles*, 1883.

- 28. Outlines.**—The north is rolling prairie, with numerous lakes and marshes. A long lake from Section 34 lies parallel with the north boundary to Section 32.—*T. Fawcett*, 1883.

Rolling prairie, with a few sloughs. Soil, clay loam. Rates second class.—*C. F. Miles*, 1883.

- 29. Outlines.**—Along both the west and east boundaries, rolling prairie, with clay loam soil, 3 to 6 inches deep, on a clay sub-

soil. Water scarce. No wood. The land is rated class 1, excepting in the north of the township, in a stony alkaline valley, nearly a mile wide, it is class 3. The semi-sections adjoining this flat are rated class 2. There is no wood, and in the north no water, but several small ponds occur in the southern sections. The trail from Red Deer Forks to Edmonton crosses from Section 13 to 31.—*J. K. McLean, 1884.*

South, rolling prairie, with numerous lakes and marshes. Soil, clay and dark loams. Class 2.—*T. Fawcett, 1883.*

30. Outlines.—Along the west boundary, going north, the first one and a-half miles lies in a stony alkaline flat, which stretches across the township. The rest of the township is rolling prairie, with a clay loam soil, 3 to 9 inches deep, and occasional intervals of sandy loam on a clay subsoil. Class 2. There are small ponds scattered about, but, on the whole, water is scarce, and there is no wood. A creek, 4 feet wide and 1 foot deep, crosses the southern portion of the township, the water of which has but slight indications of alkali.—*J. K. McLean, 1884.*

31. Outlines.—The surface, both east and west, is rolling prairie. There is no wood, and only a few ponds of water. Soil, principally sandy loam, on a subsoil of sand or clay, but on the first one and a-half miles, going north on the east line, it is clay loam over clay. The usual depth is 6 inches. The land is rated class 2. A narrow, muddy pond, about a mile long, runs parallel with the line in Sections 30 and 31. There is also a small distribution of ponds and marshes, but the number is not great. No wood.—*J. K. McLean, 1884.*

32. Outlines.—The country along the north boundary is open prairie, with a good soil. In Section 35 is a creek connecting with a lake north of it. Several small marshes on the four eastern sections. No wood.—*E. Bray, 1883.*

Rolling and undulating prairie. Clay loam and sand loam soil; clay subsoil. Along the west boundary, generally, sandy loam, and the subsoil, alternately, sand or clay. Class 2. Section 6, and part of 7, is clay loam. There is no water or wood. Along the east boundary there are shallow, fresh-water ponds in each section.—*J. K. McLean, 1884.*

33. Outlines.—Rolling prairie. Sand loam soil; clay subsoil. Class 2. A small creek crosses the northern portion of this township. Water is scarce along the west boundary. Along the east boundary, on Section 13, is an alkaline valley, in which is a creek. Shallow ponds of fresh water occur at intervals on the first four and a-half miles going north. Excepting the vicinity of the valley, on Section 13, the land is rated class 1.—*J. K. McLean, 1884.*

South, open prairie, with a good soil. No wood.—*E. Bray, 1883.*

34. Outlines.—Rolling prairie. Clay loam and sand loam soil; clay subsoil. Chiefly 4th class, but along the west boundary all sandy loam soil, 3 to 8 inches deep, on a clay subsoil. Rated as follows: sections 7, 18 and 19, nearly all class 1. Numerous fresh, shallow

ponds occur on the first four miles going south, and along the east boundary also. There is no wood in the township.—*J. K. McLean*, 1884.

- 35** *Outlines.*—Along the north boundary, very broken country, with a second class soil.—*T. Kains*, 1883.

Rolling prairie. Class 1, except the north-west portion, which is broken and hilly and class 3. West, rolling and hilly prairie. Alluvial soil, sandy loam; subsoil alternately clay or sand. The north half of Section 7 is rated class 1. The southern portions of Sections 6 and 7 class 2; and what remains class 3. All the east is clay loam, and class 1. There is plenty of water, but no wood in the township.—*J. K. McLean*, 1884.

- 36** *Outlines.*—North, hilly prairie, with numerous ponds, grass sloughs and small lakes. Soil, sandy loam, averaging about 4 inches in depth, on a subsoil of sand. Rated class 2 everywhere, except on the western half of Section 33, where it is class 1.—*T. Kains*, 1883.

Nearly the whole of this township is very broken and hilly. Class 3. On Section 13 is an alkaline lake. For the first four and a-half miles going north, on the east side, shallow ponds of fresh water were met with occasionally. As a general rule, the soil is sandy loam over clay, but sometimes the order is reversed. The classes of soil are chiefly 1 and 2, with some 3. In the south-west water is scarce. There is no wood in the township.—*J. K. McLean*, 1884.

- 37.** *Outlines.*—The first three miles of the west boundary, going north, is heavily-rolling prairie. The remainder of the line is in the Neutral Hills, which rise to a height of 400 to 500 feet. There is a considerable quantity of poplar among them, the most of which is on Section 30. Water is not very plentiful, but one or more small ponds occur on every section, excepting 19 and 31. The soil is generally sandy or clay loam, over clay. Rated class 1 in the south, and classes 1 to 3 in the north.—*L. R. Ord*, 1883.

The surface is broken and hilly, with gravelly and stony ridges. There is some wood on Section 24 and in the north of 13. On Section 1 is a small lake. Small sloughs or watercourses occur on every section. Soil in the east, a hard sandy loam, over sand. Classes 3 to 4. The best land is on Section 36.—*J. F. Garden*, 1884.

South, hilly, with numerous ponds and sloughs. Soil, sandy loam, class 2.—*T. Kains*, 1883.

- 38** *Outlines.*—Along the west boundary the surface is heavily-rolling prairie, excepting the two northern sections, which lie in a clay flat. The soil is principally sandy loam, 8 to 10 inches deep, on a subsoil of clay or sand. Classes 2 and 3. On Section 6 is a lake, nearly half a mile wide, and on the northern half of 31 is a small creek flowing east. One or more small ponds occur on each of the other sections. There is no wood.—*L. R. Ord*, 1883.

Along the east boundary, the first four miles, going north, is open prairie, with numerous short ridges. On the two northern sections, broken and hilly land, with a few clumps of poplar.

Ponds or marshes of small size occur on every section. The soil is rated class 3, being generally a light sandy loam.—*J. F. Garden*, 1884.

- 39. Outlines.**—Along the west boundary the surface is heavily-rolling prairie, with a plateau on adjoining portions of Sections 30 and 31, and a coulée in the northern part of the latter. There is no water or wood. Soil, principally, sandy loam over sand. Rated class 2, generally, the best land being on Section 18 and the poorest on 6 and 19.—*L. R. Ord*, 1883.

Section 1 is high, open prairie, with a dark sandy loam soil on a sandy subsoil. Class 2. Ribstone Creek, which enters this township near the south-west corner, crosses the east boundary on Section 12, and from thence flows due north through a long interval of marsh, 40 to 120 rods wide, portions of which are almost impassable. The great bulk of this marsh is without the township, but on Section 25 and the south of 36 it is about equally divided by the line. It is generally fine hay land. The land adjoining the marsh, in the valley of the creek, is open, even and sandy, being rated class 3 on Sections 12 and 36, classes 3 to 4 on 25, and class 4 on 13 and 24. The country rises gently to the west of the valley. There is no wood —*J. F. Garden*, 1884.

- 40. Outlines.**—Along the west boundary the surface is rolling prairie, with numerous small bluffs of poplar. The greater part of Section 31 is densely wooded. There are several ponds on Sections 19 and 30, and in a ravine, nearly half a mile wide, on the north of Section 6, is a small creek flowing east. The soil is sandy loam, and is generally rated class 1.—*L. R. Ord*, 1883.

North, principally rolling prairie, very stony on the eastern sections. Lakes, ponds and marshes occur all along the line, except Section 34. Wood is scarce, though not altogether absent. Soil, principally black loam, with sandy subsoil. Rated class 1 on Section 36, class 2 on the next two sections, and class 3 on the rest.—*C. A. Magrath*, 1883.

Along the east boundary the surface is generally hilly, broken or high and rolling. There is a tolerably good supply of wood, most of which is found on Sections 12 and 13. Water, as a rule, is plentiful. On Section 25 is a lake, over three-quarters of a mile wide. Section 36 is somewhat stony. The soil is generally a dark sandy loam, over sand, and rates as follows: Section 36, classes 1 to 2; 25 and 24, classes 2 to 3; 13, 12 and 1, class 3.—*J. F. Garden*, 1884.

- 41. Outlines.**—Is composed of rolling land, with some high land or ridges in the west, and and covered with poplar, some of it being 8 inches in diameter. Poplars, willows and numerous sloughs are widely distributed over the surface. Some scattered stones were observed. First class grazing land here and there. Part of a lake lies in a depression in Section 7, which extends some distance eastwards. The soil is a dark sandy loam. Classes 2 to 3.—*J. F. Garden*, 1884.

The southern part of the township contains scattered bluffs of poplar, and has a first class soil. A few large lakes are to be seen lying on the southern tier of sections.—*C. A. Magrath*, 1884.

42. *Outlines.*—The central part is hilly, with poplar bluffs and numerous sloughs and ponds, and is best described as a park-like country. The soil is a dark loam. Classes 1 to 2. In the south the surface is rolling, but otherwise with similar features. In the north the land is broken by low sand ridges, with scrub poplar and willow. Class 4.—*J. F. Garden*, 1884.

43. *Outlines.*—The westerly part is broken by low sand ridges or rolling sandy land, with scattered scrubby poplar, except in the south-west, where some of the trees are 12 inches in diameter. Only a few sloughs were noted, and the grass being poor it was classed 4. In the easterly portion the surface is high and rolling southwards, but becomes lower and undulating in the north, while in the north-east corner a valley, with large ponds and capital grazing land, extends westerly. Clumps of poplar and willows, and numerous ponds and sloughs, are scattered over this section, with good grazing about them. The soil varies from loam to sandy loam, the classification being 2 to 3.—*J. F. Garden*, 1884.

44. *Outlines.*—North, the line passes over a hilly and knolly country, almost covered with a growth of short, stunted poplar, generally rotten at the heart. The soil is sandy, and rates third class.—*T. Kains*, 1883.

The surface, in the west part, is composed principally of low sand ridges, with scattered poplar bush, ground cedar, poor grass, and not much water. Classes 3 to 4. The easterly part is rolling, with more water in the sloughs and ponds. The grazing in this section is good, with somewhat better soil, varying from loam to light sandy loam. Classes 2 to 3. Poplar and willows are scattered over it, the former being quite thick in Section 13.—*J. F. Garden*, 1884.

45 *Outlines.*—The soil, in the south-west part, is sandy and mostly overgrown with small poplars and willows. Battle River runs through the south part of the township. Along the east boundary the land is good and interspersed with bluffs of young poplar — *J. J. McArthur*, 1883.

The southern tier of sections is covered with short and stunted poplar, which is only fit for fuel. The surface is inclined to be hilly and uneven, with a sandy soil, which rates third class. —*T. Kains*, 1883.

46. *Outlines.*—From the south-west corner, the valley of Battle River follows the east boundary for four miles. Buffalo Coulee touches the north-east corner. The remainder of the township is high and undulating, with many bluffs of dry and green poplar. Soil, first class.—*J. J. McArthur*, 1883.

47. *Outlines.*—Undulating, with many lakes and marshes, and interspersed with poplar bluffs. Buffalo Coulee runs across the township. Soil, first class.—*J. J. McArthur*, 1883.

- 48. Outlines.**—North, country more or less timbered, some suitable for building purposes, but mostly willow scrub and some dead poplar. Numerous ponds and swamps and small lakes, some of which are saline. Soil, first class quality, being a black vegetable mould, varying from 4 to 12 inches in depth, with a subsoil of clay or sand loam.—*T. Kains*, 1882.

Undulating, with many lakes and ponds. The western part is thickly interspersed with poplar bluffs. Soil, first class.—*J. J. McArthur*, 1883.

- 49. Outlines.**—Heavy-rolling or hilly, and nearly all covered with poplar, willows and dry wood, suitable for building and other purposes. A belt of large timber, about 10 chains wide, appears all along the south bank of Grizzly Bear Coulee, which crosses in the north half. Here, this coulee contains fresh running water, about 10 links broad by 2 feet deep, the valley being about 20 chains wide, and having banks about 80 feet high. This water comes from a lake that encroaches on the north-west corner. It is considerably broken in the south half by very deep ponds and lakes, some of which are slightly alkaline. The soil ranks first and second class.—*P. R. A. Belanger*, 1884.

South, Section 1 consists of rolling country, thickly dotted over with scrub and small timber. Several branches of a large lake extend northward across the line along Sections 2 and 3. On the eastern half of Section 4 is a small lake. Between this and a large lake on Section 5 there is an interval of rolling country. Soil, black loam. Class 1.—*T. Kains*, 1882.

- 50. Outlines.**—The country is hilly, and interspersed with numerous clumps of poplar, some of which are suitable for building purposes. The land, though broken by ponds, generally rates first class.—*P. R. A. Belanger*, 1884.

- 51. Outlines.**—Is ordinary rolling prairie, with patches of willows and a few clumps of small poplar in the east half. The west half rolls more heavily and is more timbered. There is a lake, about four miles long and from 10 to 60 chains broad, in the south half. A small creek of fresh water flows across the west boundary of Sections 6, 7 and 18. The Vermillion River enters this township in Section 6, and runs easterly across the southern tier of sections. It is here but a stream of 75 links broad, with 2 feet of water. A large belt of hay appears in the valley on both shores. The south bank is all along covered with timber, from 4 to 12 inches diameter. The soil rates first, second and some third class, in the vicinity of the river, where it is red crystal sand.—*P. R. A. Belanger*, 1884.

- 52. Outlines.**—In Section 36 there is a small lake; in 35 a creek and small marsh; in 34 two marshes, a cart trail and creek; a creek between 32 and 33; in 32, a marsh and Indian cart trail, and in 31 a pond. Some, birch, poplar and scrub timber along line. The land is of an almost uniformly excellent character. This range is as fine as any passed over in the North-West. Water all fresh.—*W. A. Ashe*, 1882.

The eastern half is rolling prairie, with very few patches of willows. The west half slopes gradually towards the east, and is heavily timbered with poplar, cottonwood and some birch. Along the first four miles and a-half on the west boundary, from the 14th Base, a continuous bush of timber of all sizes, from 1 to 24 inches diameter, and may be adapted for all purposes of building and lumbering. A beautiful creek, from 5 to 10 links broad, with 6 inches of excellent water, flows in an easterly direction from a small lake crossed by the west boundary of Sections 6 and 7. Another small creek, with good water, was crossed on west boundary of Section 31. Numerous lakelets and ponds appear in the eastern portion. The soil is either clay or sandy loam, with clay subsoil, and of first class quality.—*P. R. A. Belanger*, 1884.

- 53.** *Outlines.*—Generally, is rolling land, though a few small tracts were seen which may be called hilly. To the south-west of a line drawn through Section 4 to the northerly limit of Section 19 the land is covered with poplar woods, which will range 5 inches in diameter; while to the north-east of such line the timber is in bluffs, with considerable scrub and some open land. The soil is generally of fair quality, and water is abundant.—*E. Bray*, 1884.

The country, as it appeared from the southern boundary, contained numerous small marshes and several small creeks. The soil is of a very fine character, and the water is fresh.—*W. A. Ashe*, 1882.

- 54.** *Outlines.*—Is generally rough land, mostly covered with willow scrub and poplar timber, the latter being of an average size of about 4 inches in diameter. The soil varies considerably in different parts of the township, but it will probably average second class. The township is well supplied with water by ponds, &c., and also by a stream which runs north-westerly from Section 1 to Section 30.—*E. Bray*, 1884.

- 56** *Outlines.*—North, timbered with poplar and scrub, but this timber is small, and of little value. The country is broken and the soil poor.—*G. B. Abrey*, 1883.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN

RANGE VIII.

5. *Outlines*.—Undulating and rolling country. Soil, a sandy loam, with light, blue clay subsoil, in many places mixed with stone and gravel. Lake Pakoghkee covers most of this township. The country north of the lake consists of undulating prairie, with sandy ridges and a soil of white sand.—*C. E. Wolff*, 1883.

The easterly two-thirds of the south boundary is in Lake Pakoghkee. West of the lake the country is undulating prairie. The soil is "washed out" and the vegetation poor.—*O. J. Klotz*, 1883.

6. *Outlines*.—Undulating and rolling country. Soil, a sandy loam, with light, blue clay subsoil, in many places mixed with stone and gravel. South-east it is white sand.—*C. E. Wolff*, 1883.

7. *Outlines*.—Rolling prairie, broken on Section 19 by an alkaline coulée, the banks of which are very stony, and by the valley of Peigan Creek on Section 24. Soil, sandy loam, class 3, in the west, and clay loam, class 2, in the east.—*J. G. Sing*, 1883.

8. *Outlines*.—North, gently-rolling in the north-east and undulating in the north-west. Section 33 is broken by Seven Persons' Coulée, containing a sluggish, shallow stream, along the banks of which there are a few trees and some willows. Soil, sandy loam, 15 inches deep. Class 2. There is very good grass.—*O. J. Klotz*, 1883.

Rolling prairie, very dry, with scanty growth of grass. Soil, principally gravelly loam and sand. Class 3. It is rated class 2, however, along Section 31, and on a few other sections, where the character changes to sandy loam. The Peigan Creek flows through this township from one to two miles east of the line.—*J. G. Sing*, 1883.

9. *Outlines*.—Rolling prairie, broken by several coulées, containing water. Soil: in the west, clay, rated generally class 2, and in the east, for the most part, gravelly, and rated class 3 on all except Sections 1, 12 and 36, in the first and last of which it is sandy or sandy loam. Water very scarce and the grass poor, owing to lack of moisture.—*J. G. Sing*, 1883.

South, level to undulating prairie, with good sandy loam soil. Intersected by the Seven Persons, or Big Sandy Coulée, a fine valley of nearly a mile in width, through which flows a stream in the spring time, but afterwards merely a succession of pools. A few ash-leaved maples are on its banks.—*O. J. Klotz*, 1883.

Sub-division.—The southern portion of the township is hilly, but the land is remarkably good. The northern halves of Sections 36, 35 and part of 34, are good hay lands. The west branch of Seven Persons' River runs through this township. It dries up to

a small creek in summer, but leaves fresh pools, here and there, of good water. There are two lakes of good water in the north-west corner.—*A. F. Martin*, 1883.

- 10.** *Outlines.*—Rolling prairie. Soil, sandy loam. Class 2, except north-east, where it is gravelly, and rated class 3, and on Sections 7, 18 and 31, which are broken by stony coulées. This township is watered by a large creek, which enters at the north-west corner of Section 31, and continuing in a south-easterly direction, crosses the eastern boundary on Section 1. There are also a number of smaller creeks, mostly tributaries of this one.—*J. G. Sing*, 1883.

Sub-division.—Generally rolling. Soil, clay loam, on a clay and clay loam subsoil. Class 1. Several creeks—dry in summer—cross the township, and surface water is scarce. There is no wood whatever.—*A. F. Martin*, 1883.

- 11** *Outlines.*—Rolling prairie. Soil, sandy loam in the north-east, sand and gravel in the middle, and light clay in the south-east, clay or clay loam in the west, and all class 2. Water very scarce, there being only a couple of very small creeks in the south part of the township.—*J. G. Sing*, 1883.

Sub-division.—Rolling prairie. Soil, generally, a clay loam on clay subsoil. Classes 1 and 2. The surface water is generally alkaline, and good water is very scarce. There is no wood. The Fort McLeod and Medicine Hat trail crosses the township.—*A. F. Martin*, 1883.

- 12** *Outlines.*—North, Sections 32 to 36 are undulating prairie. Soil, sandy loam, the Saskatchewan River lying from one to five miles south. In Section 31 the river passes to the north side. The north side of the valley is about 100 feet high. There is a clay flat on the south side of the river, about 30 chains wide.—*C. A. Magrath*, 1882.

East, the surface is rolling prairie, excepting in the vicinity of the South Saskatchewan River and its valley, in which are numerous coal banks, coulées &c., and the high hills bounding the valley on either side. The river itself enters the township near its north-west corner; continuing in a south-easterly direction till near the middle of Section 21, it turns its course, and proceeds north-eastwardly crossing the line on Section 25. Soil, generally sandy loam. Class 2, except where it is rough or clay, class 4, or clay, with gravel and stone, class 3.—*J. G. Sing*, 1883.

Sub-division.—The South Saskatchewan enters the township by Section 31, courses over 32, 28, 21, 22, 23, 26, and leaves by 25. The land along the river is rather light, but it improves considerably in quality at a short distance inland. Deposits of bituminous coal exist along the bank of the river, but the beds are rather small. The immediate banks of the river are broken, but not so much inland as in other townships. The soil is good, generally, and is well suited for settlement.—*C. Desjardins*, 1883.

- 13.** *Outlines.*—Generally, is a rolling prairie, without water or wood. The soil is a grey clay, with bluish white clay subsoil. Grass very short.—*F. W. Armstrong*, 1883.

The west boundary, going north, strikes the river in 18 chains, and for two sections is in the valley. The remaining sections are rolling prairie. Soil, sandy loam. The first five southerly sections are undulating prairie, with a sandy loam soil. Section 6 is broken by the Saskatchewan River.—*C. A. Magrath*, 1882.

Sub-division.—The surface is gently undulating, but not hilly. The soil is a clay loam of a shallow depth. The South Saskatchewan runs across the south-west corner, which renders Section 6 very broken and hilly. The surface of the township is very dry, and water is scarce; grass much stunted, and no wood; but oats and barley were likely to thrive better than wheat.—*J. Warren*, 1883.

- 14.** *Outlines*.—North, south and east boundaries, rolling prairie, without water or wood. The soil is a grey clay, on a bluish white clay subsoil. Gravelly in places. The growth of grass is very short.—*F. W. Armstrong*, 1883.

West, this township is rolling prairie. Soil, sandy loam.—*C. A. Magrath*, 1882.

Sub-division.—Level, with a few slopes to the south. Soil, clay loam, classes 1 and 2, of shallow depth, 3 to 5 inches; but suitable for barley and oats, which seemed to thrive well along the C. P. R. track. Water is scarce, and there is no wood. The C. P. R. runs through Sections 12 to 20 inclusive, and 30.—*J. Warren*, 1883.

- 15** *Outlines*—Along the north boundary, broken and hilly country. Soil, sand and gravel, in many places strewn with small boulders. These features predominate until close to the south boundary, where it turns to a loam.—*C. E. Wolff*, 1882.

West, the country is hilly and dry, the soil being clayey, hard and baked.—*O. J. Klotz*, 1882.

South, principally rolling land, with clay soil. The eastern sections have a stony and gravelly surface. No wood or water.—*F. W. Armstrong*, 1882.

North, broken and hilly. Soil, sand and gravel, in many places thickly strewn with small boulders.—*C. E. Wolff*, 1882.

Sub-division.—Mostly, rolling and undulating prairie. The soil is, in general, very poor, being sandy and gravelly, and ranks 2 and 3, except the east of Sections 29 and 32, which are a sandy loam, class 1. There are some alkali marshes in Sections 12 and 15, but elsewhere, water is fresh. The C. P. R. crosses the southern part. A small lake occurs on Sections 9 and 8, entered by a large coulée running through the west part of the township.—*A. Bourgeault*, 1883.

- 16** *Outlines*.—North and west is hilly, dry and baked, furnishing very poor feed. At the western extremity is an alkaline valley, having a north-easterly course.—*O. J. Klotz*, 1882.

East, is a very broken country. The soil is light sand and gravel, with a white sand and clay subsoil. Southwards, the surface is in many places thickly strewn with small boulders.—*C. E. Wolff*, 1882.

Sub-division.—Mostly rolling prairie, with some ridges and gullies on the north and east which are stony and gravelly, and class 3. The rest of the township is sandy, sandy loam and sand and gravel. Classes 2 and 3. Fresh water in the hay marshes. No wood.—*A. Bourgeault*, 1883.

- 17. Outlines.**—North and east, open, rolling prairie. Very scanty vegetation. Soil, classes 3 and 4, very poor and barren. Brackish lake in Sections 13 and 14.—*L. R. Ord*, 1882.

The country along the west and south is hilly and very dry. The grass and general vegetation is very poor. An alkaline valley lies to the south-west.—*O. J. Klotz*, 1882.

Sub-division.—Heavy, rolling prairie in the east, south [and west parts, the north part being level. There are numerous marshes, mostly containing soft water. The soil throughout is a poor sandy loam, not suited for tillage. A deep valley runs through Sections 1, 2, 3 and 4, which is about 40 chains wide and has a clay soil.—*P. Gosselin*, 1883.

- 18. Outlines.**—North, the surface is generally rolling prairie. Alluvial soil, 2 inches deep; subsoil, clay. Class 2. No water or wood. *W. Bell*, 1882.

West, this township is rather level. In northern half there are several wet marshes.—*O. J. Klotz*, 1882.

South and east, open, rolling prairie. Very scanty vegetation. Soil, classes 3 and 4; very poor and barren. No wood.—*L. R. Ord*, 1882.

Sub-division.—Heavy-rolling prairie. The east part is hilly, rough and gravelly, and the whole of the township is well interspersed with fresh-water marshes. On Sections 13 and 24 there is a fresh-water lake of 220 acres. The soil is generally a sandy loam, of class 3; but the west portion might be made suitable for agriculture. The east part would only be adapted for grazing.—*P. Gosselin*, 1883.

- 19. Outlines.**—North, east and south, rolling country, with second class soil—generally a hard clay. The water in some of the sloughs, is alkaline, and in others fresh. There are no running streams. No wood.—*W. Bell*, 1882.

West, rolling prairie, with a clay soil. Class 2. No wood and no water, except a small pond in the south of Section 6.—*T. Drummond*, 1883.

Sub-division.—Rolling prairie, with some sections of undulating prairie. Soil, partly clay and sandy loams. Classes 1, 2 and 3. There are numerous sloughs and marshes, and a few ponds of good water, but no running streams.—*P. Gosselin*, 1883.

- 20. Outlines.**—North, the surface consists of prairie, level in the west, rolling on the two intermediate sections, and covered with high-rolling hills in the east. Soil, clay. Class 2. No wood and scarcely any water. Westwards, rolling prairie, with a clay soil. Class 2. In Section 30 is an alkaline lake, in its immediate vicinity the land is rated class 4. No wood or fresh water.—*T. Drummond*, 1883.

Along the east boundary the surface is uneven and hilly, and on the south undulating. The soil is of fair quality, being generally a hard clay, and rates class 2. The water in some of the sloughs is fresh, and in others alkaline. There are no running streams and no wood.—*W. Bell*, 1882.

Sub-division.—Rolling prairie. Soil, clay loam class 2, with some sections of good sandy loam. There are three lakes—one in Section 13 (alkaline), and the others in Sections 15 and 30, which are fresh. There are numerous marshes, which dry as the summer advances. No wood. A good farming township.—*P. Gosselin*, 1883.

- 21. Outlines.**—North and east, high-rolling prairie, with numerous alkaline ponds. The soil is light sandy loam, very dry and hard; subsoil, clay. Very well suited for grazing, as there is a very good growth of grass.—*A. F. Cotton*, 1882

Along the west boundary the surface is rolling. Soil, clay. Class 2. Several ponds occur in Sections 19 and 30, but the southern sections are dry. There is no wood. The south is level in the west, rolling in the middle, and has high-rolling hills in the east. Soil, clay. Class 2. Water scarce.—*T. Drummond*, 1882.

- 22. Outlines.**—North, south and east boundaries, hilly prairie, broken in the north-west corner by the Red Deer River, which runs through a valley 300 feet deep and from one to two miles wide. Numerous deep ravines run into the valley. Soil, light sandy loam and gravel.—*A. F. Cotton*, 1882.

West, the land is almost all second class, and the country is very rough. The Red Deer River crosses the line in Section 30. The banks at this point are 250 feet high. There seems to be timber all the way along the valley, except where there are cut banks on both sides; but it is a narrow belt, and not of much account. The wood is principally cottonwood and poplar.—*T. Drummond*, 1882.

- 23. Outlines.**—North, south and east boundaries, very much broken by deep gullies, and in the south-east corner by the Red Deer River, which lies in a valley about 300 feet deep. The soil is sandy loam and gravel, very hard. There is a clear creek of fair size in Section 4, flowing south. No wood.—*A. F. Cotton*, 1882.

West, surface knolly and rolling. Soil, generally sandy loam, 10 to 15 inches deep; subsoil, gravel and hardened clay. A little water and some small meadows. In the middle of this township there is a large creek of saline water, averaging about 30 feet wide and 1 foot deep.—*W. Ogilvie*, 1882.

Sub-division.—The Red Deer River and valley crosses the south-east corner, with similar land and water features described in Township 22 of this range. The north-east, and Sections 16, 17 and 18, are hilly and rough. The north-west and south centre west are rolling. Soil, sandy loam on a sandy clay subsoil—class 2—and on the hills and ridges sandy, stony and gravelly. In the valleys the grass grows luxuriantly, and is good for grazing. An alkaline creek flows eastwards to the centre of the township, where it is buried, runs underground for two miles, and then reappears on Section 17. No timber.—*R. J. Jephson*, 1883.

- 24** *Outlines.*—Along the north and west boundaries, rolling and broken prairie, with some knolls, boulders and gravelly ridges. Soil, sandy and clay loam. In the north there are some flats of good gravelly loam, from 12 to 15 inches deep; subsoil, hard clay. In the north centre there are also some ponds of deep, fresh water, and some fair meadows; but in the west there are only a few small meadows, and very little water.—*W. Ogilvie, 1882.*

On the east side the country is high-rolling prairie. There is a lake on Section 24, and there are also a few marshes on the northern sections. Along the south boundary the surface is hilly, and much broken by deep gullies. Soil, sandy loam and gravel; very hard. No wood—*A. F. Cotton, 1882.*

Sub-division.—Rolling prairie. Soil, a dry sandy loam on a sandy subsoil. Vegetation is sparse, except in the valleys. There is plenty of good water to be had in sloughs, which are deep and fresh. There are also two lakes on the north boundary, which are occupied in the fall by numerous flocks of wild fowl. There is no timber in the township.—*R. J. Jephson, 1883.*

- 25** *Outlines.*—Along the west boundary, rolling and undulating in the southerly two-thirds and hilly in the north-west. It is also hilly in the northerly two-thirds of the east side of the township. Soil, clay loam, 8 to 18 inches deep; subsoil, clay. Class 2. Several watercourses occur toward the north, but they were all dry in the month of July. There is no wood.—*C. F. Miles, 1883.*

Generally, as seen from the southern boundary, the surface was rolling and the ridges gravelly. The bottoms had good gravelly loam, from 12 to 15 inches deep. Occasional ponds of deep fresh water, and some fair meadows—*W. Ogilvie, 1882.*

Sub-division—Highly rolling prairie, hilly in the north-east. Soil, clay loam on clay subsoil, and class 1. The grass is very luxuriant and heavy. The northern two tiers of sections are fine wheat sections. There are some fairly fresh-water marshes, sloughs and lakes, except some lakes in the south, which are fresh in spring, but occupied in fall by immense flocks of wild fowl, which raise an unbearable stench.—*R. J. Jephson, 1883.*

- 26.** *Outlines.*—In the east the land is hilly, and rates class 2; but along the west boundary, Section 6 is hilly and the rest rolling prairie. The three southern sections are rated class 2, and the rest class 1. The soil on both sides is principally clay loam, over clay. Water is generally somewhat scarce, and there is no wood. *C. F. Miles, 1883.*

Sub-division.—Rolling prairie, hilly towards the east. Soil, a rich loam—on clay subsoil—growing a luxuriant crop of grass. The water in the sloughs—which are few and deep—is fairly fresh and soft. There are also two or three small stagnant lakes much occupied in fall by wild fowl. No timber. A fine township for farming.—*R. J. Jephson, 1883.*

- 27** *Outlines.*—East and west boundaries, high, undulating and rolling prairie, with a depression in the centre, containing ponds and lakes. Soil, clay loam. Rates second class.—*C. F. Miles, 1883.*

28 *Outlines.*—North, rolling prairie, with numerous marshes, marshy lakes and ponds. Soil, clay loam on clay subsoil. Generally class 2.—*T. Fawcett*, 1883.

East and west, undulating prairie. The north-west half consists of a large alkaline flat, with lakes and grassy marshes; drained near the north-west corner by the Blood Indian Creek. The east half rates first and second class; the west half second and third class.—*C. F. Miles*, 1883.

29. *Outlines.*—Rolling prairie, with a clay loam soil, 3 to 6 inches deep, on a clay subsoil. Rated class 1 on all the east sections, except 31, where it is class 2. The greater portion of the north is in an alkaline valley. The trail from Red Deer Forks to Edmonton is crossed on this section. There is no wood, and water is scarce.—*J. K. McLean*, 1884.

Southwards, rolling prairie, with numerous lakes and marshes. Soil, clay loam over clay. Generally class 2.—*T. Fawcett*, 1883.

30. *Outlines.*—In the south-east there is a stony alkaline flat, near which is a narrow ravine, with a creek flowing east. The balance of the country is rolling prairie. There is no wood. Soil, eastwards, clay loam, 3 to 9 inches deep, on a clay subsoil. Class 2. Westwards, light and sandy.—*J. K. McLean*, 1884.

31. *Outlines.*—Eastwards, the country is rolling prairie, with soil principally sandy loam over clay. Class 2. Water scarce. No wood.—*J. K. McLean*, 1884.

32. *Outlines.*—Along the north boundary, level prairie, with good soil. On the eastern half of Section 32 the line is crossed by a creek flowing north-east. There is no wood, and water is scarce.—*E. Bray*, 1883.

Rolling prairie, with alluvial soil, generally sandy loam and the subsoil alternately sand or clay. Class 2. On Section 1 and part of 12 the soil is clay loam over clay.—*J. K. McLean*, 1884.

33. *Outlines.*—Along the east boundary, rolling prairie, with sandy loam soil over clay. Class 2. Water scarce. No wood.—*J. K. McLean*, 1884.

South, level prairie, with good soil. A creek on Section 5, and on Sections 3 and 4 a small lake. No wood.—*E. Bray*, 1883.

34. *Outlines.*—Rolling prairie, with sandy loam soil, 3 to 8 inches deep, on a clay subsoil. Rated as follows: on the east side, Sections 12, 13 and 24, class 1; the south half of Section 1, class 3; and what remains class 2. Numerous shallow ponds occur, nearly all of which are fresh. There is no wood.—*J. K. McLean*, 1884.

35. *Outlines.*—Rolling and hilly prairie, with sandy loam soil on a subsoil of clay or sand. The northern half of Section 1 is rated class 1; the southern portions of Sections 1 and 12, class 2; and what remains, class 3. There is plenty of water, but no wood.—*J. K. McLean*, 1884.

36. *Outlines.*—North: surface, for the first two miles westward, very hilly and broken; on the next two, rolling; and from thence to the

end of the line, undulating prairie. There are numerous ponds and swamps on Sections 33 and 35, and a few lakes, ponds and grass sloughs on Section 36. Soil, principally, sandy loam 3, to inches in depth, over sand; but there are occasional intervals of clay loam over clay, or other variations. It is rated class 1 on Sections 34, 32 and 31, and class 2 on the rest.—*T. Kains*, 1883.

Except along the western boundary, this township is very broken and hilly prairie, with sandy loam soil, varying in depth from 2 to 10 inches, on a clay subsoil. Class 3. Shallow ponds, some fresh and some alkaline, occur at intervals on the northern sections, but in the south water is scarce. There is no wood.—*J. K. McLean*, 1884.

- 37.** *Outlines.*—Rolling prairie. Very rough and uneven, and in the north-east corner rising into the Neutral Hills, some 400 or 500 feet above the plain, and cut by numerous deep ravines. Another range of hills, about 300 feet high, lies in the south-west corner, and both these tracts are wooded on the slope facing north, and in the ravines. The remainder of the surface is heavily-rolling, and dotted thickly with lakelets and ponds. Soil, a sandy loam, 10 inches deep, with a clay or sandy loam subsoil. Very dry, and would rank below second class.—*L. R. Ord*, 1883

South-east, hilly, and towards the south-west, rolling and undulating prairie. Numerous ponds and swamps. Soil, principally sandy loam. Rated class 2.—*T. Kains*, 1883.

- 38.** *Outlines* —Rolling prairie. A clay flat, with a small creek, crosses south-west to north-east. The creek flows north-east, with a slow current, and the banks are wooded, in places, with small cotton-wood, poplar, willow and cherry. The other sections are bare of timber, and heavily-rolling and hilly in places, with ponds and lakelets. Soil—with the exception of Creek Valley—is a sandy loam, 8 inches deep, with sandy and gravelly subsoil, and often gravel and boulders strewn on the hill tops. The Creek Valley is a clay flat, alkaline in places, and baked hard and dry by the sun, and is worthless for agriculture. Banks average second and third class.—*L. R. Ord*, 1883.

- Outlines.*—Rolling prairie towards the north-west corner, wooded with scattered bluffs of poplar, and rough and hilly in places. The hollows are generally occupied with small ponds, which have nearly all good water. The land is poor, being a sandy loam, averaging 4 to 6 inches deep, with a sand and gravel subsoil; very dry, but improving greatly towards the west boundary, where it is almost first class.—*L. R. Ord*, 1883.

- 40.** *Outlines.*—North, the surface is generally rolling and stony, with poplar bluffs, a few willows, numerous ponds and a few marshes and small lakes. The soil is sandy loam, averaging about 8 inches in depth, with sandy or, in a few places, clay subsoil. Rated class 1 on all, except Sections 35 and 36, where it is class-2 on the former and 3 on the latter.—*C. A. Magrath*, 1883.

Heavy-rolling land, with numerous bluffs of poplar and willow, and dotted with ponds. The timber is only fit for fuel and temporary buildings. Towards the southern line the bluffs

are more sparsely scattered, while in the south-east corner there is open prairie, rough and hilly in places. The soil is, in general, a sandy loam, averaging 6 inches deep, with clay loam and sandy loam subsoil. Class 2.—*L. R. Ord*, 1883.

- 41. Outlines.**—The greater part is hilly, with scattered poplar and willow bluffs of the park-like description. In Section 12 part of a small lake lies in a depression extending westerly. A high range of sandy land extends westerly in Sections 13 and 24, thickly covered with poplar. To the north the surface is undulating with poplar and willow bluffs. Numerous ponds and sloughs are scattered over the township, with good grazing land about them. The soil varies from loam to sandy loam and sand, and classes from 2 to 4.—*J. F. Garden*, 1884.

The southern portion of this township is rather hilly, but the soil is first class. There are a number of small lakes among the hills.—*C. A. Magrath*, 1883.

- 42. Outlines.**—Is of the park-like description of country, being generally a high-rolling or hilly surface, with poplar bluffs and willow sloughs. In the easterly part the soil is a dark loam, and classes from 1 to 2. In the west the land is undulating or gently-rolling, except in Section 25, where a range, about 70 feet high, extends west. A few ponds were also found in this part of it, with good grazing. Poplar and willow are scattered over the surface. The soil is from dark sandy loam to light sand, and classes from 2 to 3.—*J. F. Garden*, 1884.

- 43. Outlines.**—Battle River crosses in the extreme north-west corner, entering in Section 31 and running north-easterly in a valley about one mile broad and 250 feet deep, with deep coulées, containing bush, extending back from the valley. The bed of the river is stony and gravelly. Water from 2 to 6 feet deep. Current from 2 to 4 miles an hour, rapids frequently occurring. The cut banks of the river are from 10 to 12 feet deep of sand and clay. The water is good. The remainder of the township has a rolling or undulating surface, with low sand ridges in the north-east. Scrubby poplars, in bluffs, are scattered over it. Some willows and sloughs were noticed. The grass is generally thin and poor, and the soil mostly sand. Classes 3 to 4.—*J. F. Garden*, 1884.

- 44. Outlines.**—The north boundary, with the exception of Sections 31 and 36, is broken by the valley of Battle River. This valley, which is three-quarters of a mile in width, is timbered rather heavily in certain places. The river runs in a sandy bed, 2 chains wide, with a swift current, and 175 feet below the surface of the adjoining country. It crosses nearly all the north sections.—*T. Kains*, 1883.

Battle River traverses the west part in a northerly direction, the west edge of the valley being about one and a-half miles east of the north-west corner. In the east the surface is mostly broken and useless, low sand ridges being the prevailing characteristic, with scrubby poplar, some willows, ground cedar, and scant grass. Class 4.—*J. F. Garden*, 1884.

- 45. Outlines**—From Section 5, Battle River runs north-east through the south half. South of the river the soil is sandy, and more or less overgrown by small poplars and willows. The remainder is high and undulating, with many swamps and bluffs of poplar. Soil, good.—*J. J. McArthur*, 1883.

The whole of the southern tier of sections, with the exception of Nos. 1 and 6, is broken by the valley of Battle River.—*T. Kains*, 1883.

- 46. Outlines**.—Is undulating, and interspersed with bluffs of green and dry poplar. Soil, excellent.—*J. J. McArthur*, 1883.

- 47. Outlines**.—Undulating, with bluffs of dry and green poplar. Buffalo Coulee runs through the north-eastern part of the township. Soil, first-class.—*J. J. McArthur*, 1883.

- 48. Outlines**.—North, country more or less timbered, some suitable for building purposes, but mostly consists of willow scrub and some dead poplar. Numerous ponds and swamps and small lakes, some of which are saline. Soil, first-class quality, being a black vegetable mould, varying from 4 to 12 inches in depth, with a subsoil of clay or sand loam.—*T. Kains*, 1882.

Undulating. The south-eastern part is open, but the remainder is thickly interspersed with poplar bluffs and many lakes and swamps. Soil, first-class.—*J. J. McArthur*, 1883.

- 49. Outlines**.—Seen from east boundary, it is hilly, and thickly covered with willows, young poplar and dry wood, and considerably broken by ponds and lakes. Some clumps of fair sized poplar, suitable for building, appear here and there. The soil is black or clay loam, with clay subsoil, and of first class quality.—*P. R. A. Belanger*, 1884.

South boundary, rolling prairie, generally covered by a dense undergrowth of scrub, with considerable small poplar in the east, dead timber along the centre and toward the west, and on Section 6 some small timber. Ponds and swamps are numerous on the eastern and central sections. The soil consists of black loam, averaging about 8 inches in depth, on a subsoil of sandy loam. Class 1.—*T. Kains*, 1882.

- 50. Outlines**.—Is generally rolling, and interspersed with numerous bluffs of poplar. Vermillion River runs across Sections 35 and 36. There is water in abundance in ponds and lakes, some of which are slightly alkaline. The soil is clay or clay loam, of first class quality.—*P. R. A. Belanger*, 1884.

- 51. Outlines**.—Appears heavily timbered, as may be judged from the east boundary. The north half is most thickly covered. Vermillion River appears to run across the Correction Line in a south-easterly direction, and then turns north-east and enters Section 1. The soil is a good clay loam.—*P. R. A. Belanger*, 1884.

- 52. Outlines**.—As seen from the east boundary, it appears entirely covered with timber of all sizes, and seems to occupy the top of a coteau. Ponds of good water occasionally occur on the east boundary. The soil is either sandy or clay loam, with clay subsoil, and of first-class quality.—*P. R. A. Belanger*, 1884.

- 53.** *Outlines.*—A width of about four miles, extending across the southerly part (being about two-thirds of the area), is covered with woods of poplar, growing very closely together, but having, generally, a small average size. The remainder of the township is mostly covered with scrub and poplar bluffs. The soil is of fair quality, and water is plentiful, but the land is usually of a rough and hilly nature.—*E. Bray*, 1884.
- 54.** *Outlines.*—Only a small portion is rolling, the greater part being rough and hilly, and is mostly covered with scrub, with poplar woods on the northerly slopes of the hills. The soil is generally of good quality, and in the openings produces excellent pasture. A stream of good clear water runs through Sections 19, 30 and 31, while another runs through Sections 25 and 36, each flowing northerly, and evidently joining at no great distance.—*E. Bray*, 1884.
- 56.** *Outlines.*—North, timbered with poplar and scrub, but the timber is small and of little value. The country is broken and the soil poor.—*G. B. Abrey*, 1883.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE IX.

5. *Outlines*.—Undulating and rolling country. Soil, a sandy loam, with light blue clay subsoil, in many places mixed with small stone and gravel. On Section 13 the line crosses an arm of Lake Pakoghkee, half a mile wide, and extending westward for about four miles.—*C. E. Wolff*, 1883.
- Along the south boundary, undulating prairie, somewhat stony. Vegetation thin.—*O. J. Klotz*, 1883.
6. *Outlines*.—Undulating and rolling country. Soil, a sandy loam, with light blue clay subsoil, in many places mixed with small stone and gravel.—*C. E. Wolff*, 1883.
7. *Outlines*.—Generally rolling prairie, with stony coulées on Sections 7, 18, and 24. The northern half of 18 is occupied by Long Lake, the water of which is alkaline. Soil, north of the lake, gravel and sand, class 3; south of it, clay mixed with sand or gravel, class 4, excepting Section 1, where it is sandy loam, class 3. Fresh water is very scarce and grass poor. On the east the soil is sandy loam. Class 3 on all the Sections, except 24 and the northern half of 13, where it is class 4.—*J. G. Sing*, 1883.
8. *Outlines*.—Rolling prairie, very dry, and the grass poor. Soil, principally, gravelly sand. Class 2 on Section 36; class 3 on all the rest, changing to sandy loam on Section 1.—*J. G. Sing*, 1883.
9. *Outlines*.—The surface west and east consists of rolling prairie, broken only by a few coulées, one on Section 25, having a pond nearly half a mile in length and from 2 to 4 chains wide. Soil, clay. Rated class 2. To the west there is some gravelly soil. Class 2. No timber or water, and very little grass.—*J. G. Sing*, 1883.
- South, undulating prairie, intersected by one coulée. Sandy loam soil, and rather dry. The few marshes dry up rapidly.—*O. J. Klotz*, 1883.
- Sub-division*.—Generally rolling prairie. Soil, a good, rich sandy loam, class 1, suitable for farming. There are many hay marshes, which usually dry up during the summer, except one on Sections 3 and 4. There is no wood.—*C. Desjardins*, 1883.
10. *Outlines*.—Rolling prairie, broken on the eastern side by stony coulées. Soil, clay and clay loam on the west, with much gravel, and sandy loam on the east. Rated class 2, generally. The township is rather poorly watered by a couple of small creeks, one of which extends south-easterly from Section 30 to Section 12.—*J. G. Sing*, 1883.
- Sub-division*.—High and rolling. Soil, good sandy and clay loams. Class 1. The clay loam soil generally lies in the valleys and bottoms. Good water is scarce. No wood.—*C. Desjardins*, 1883.

- 11. Outlines.**—Rolling prairie, a little stony toward the south very dry, and the grass poor. Soil, sandy loam on the west, and most clay and clay loam on the east. All class 2. Water very scarce.—*J. G. Sing, 1883.*

Sub-division.—Rolling prairie. Soil, clay loam, class 1, on clay subsoil. The top soil is very light, and gravelly on the ridges. Good water is very scarce, and there is no wood.—*C. Desjardins, 1883.*

- 12. Outlines.**—Along the north line the country is so broken up by coulées that it is almost impossible to chain. These coulées connect with the valley of the Saskatchewan River, north.—*C. A. Magrath, 1882.*

Rolling prairie, excepting the north, which is overrun by the hills and coulées of the South Saskatchewan River. The hills rise gradually from the river for about 50 chains southward, where they reach a height of something like 300 feet. They contain numerous seams of good coal. In this vicinity the soil is class 4, but elsewhere it is class 2, consisting of clay in the east and sandy loam in the west.—*J. G. Sing, 1883.*

Sub-division.—Generally rolling, except in the northern part, where it is much broken by ravines. The soil consists of the best sandy loam, and water is very scarce. There is no wood.—*C. Desjardins, 1883.*

- 13. Outlines.**—Rolling or undulating, dry prairie, in which, at the time of the survey, water could only be procured from the Saskatchewan River. The soil is a fair sand, somewhat gravelly on the tops of hills, suitable for agricultural and cattle raising purposes, there being plenty of good grass. The south tier of sections in this township is broken by the Saskatchewan River, which is about 15 chains wide and from 6 to 8 feet deep, flowing between banks from 250 to 300 feet high, and abounding in whitefish, pike and pickerel. Seams of coal crop out in the banks of this river in several places in this township.—*P. R. A. Belanger, 1882.*

South, the country is very much broken up by coulées from the Saskatchewan River, which courses easterly through the southern tier of sections. Starting northwards from the south-east corner, the line almost immediately crosses the River Saskatchewan, after which it leaves the valley in Section 13. The remaining three easterly sections of this township are rolling prairie, with a sandy loam soil.—*C. A. Magrath, 1882.*

Sub-division.—The north-half is gently-undulating. The south is very much broken by deep ravines running into the valley of the Saskatchewan River, which crosses Sections 1, 12, 11, 10, 3, 4, 5 and 6. The river here is deep, the south banks steep and rocky, with indications of seams of coal in some places, but no wood. The soil is a clay loam, of a depth of 3 to 4 inches, and inclined to be of a dry nature.—*J. Warren, 1883.*

- 14. Outlines.**—This township is rolling or undulating, dry prairie, in which, at the time of the survey, water was difficult to procure. The soil is a fair sand, somewhat gravelly on the tops of the hills,

suitable for agricultural and cattle raising purposes, there being plenty of good grass.—*P. R. A. Belanger*, 1882.

East, this township is rolling prairie. Soil, sandy loam.—*C. A. Magrath*, 1882.

Sub-division.—Level prairie. Soil, clay and sandy loam, on a clay subsoil. Classes 1 and 2. It is not well watered, and there is no wood. The C.P.R. crosses the north portion of the township, and Suffield Station is here located. The township might be adapted for barley and oats, as some patches of these were seen growing along the C.P.R.—*J. Warren*, 1883.

- 15. Outlines**.—North, west and south, rolling prairie; alluvial soil, 4 to 10 inches deep; subsoil, generally, clay, excepting along the south boundary, on the sections east of 32, where it is sand or gravel. The land is rated classes 2 and 3, as a rule. The C. P. R. crosses the south-west corner of this township. There is no wood or water.—*J. A. Maddock*, 1882.

East, hilly and dry, the soil being clayey, hard and baked.—*O. J. Klotz*, 1882.

Sub-division.—Gently undulating and level prairie. Soil, sandy loam on a clay subsoil. Ranks classes 1 and 2, and is well watered by hay marshes of fresh water. The C. P. R. crosses Sections 7, 6, 4 and 5. No wood.—*A. Bourgeault*, 1883.

- 16. Outlines**.—North, undulating, dry prairie, with short thin grass. East, the country is hilly and dry, the soil being clayey, hard and baked.—*O. J. Klotz*, 1882.

West, rolling prairie; alluvial soil, generally about 6 inches deep; subsoil, clay. Class 2. No wood or water.—*J. A. Maddock*, 1882.

Sub-division.—Gently rolling prairie, rising to hilly in the north-east. Soil, sandy loam. Class 2 on the former, and sandy and gravelly on the latter portions. The township is well watered by marshes of fresh water; but there is a large alkali valley in the north-east corner.—*A. Bourgeault*, 1883.

- 17. Outlines**.—Is composed of high, hilly country (hills from 30 to 150 feet high), with numerous sloughs, nearly all dry at the time of survey. The north boundary of this township runs over a gently undulating country, the hills running along about half a mile to the south. The soil is a light sandy loam, of good quality.—*H. C. Denny*, 1882.

East and south, the country is hilly and dry, the soil being clayey, hard and baked, with short and thin grass.—*O. J. Klotz*, 1882.

Sub-division.—High and hilly, with some strips or belts of undulating surface. Soil, a good sandy loam, which would be well suited for farming but for the hilliness of the surface. There are numerous sloughs containing good water.—*P. Gosselin*, 1883.

- 18. Outlines**.—Is gently undulating prairie, with numerous sloughs. The soil is a light sandy loam, and well adapted for farming purposes.—*H. C. Denny*, 1882.

East, this township is rather level. In the northern half there are several wet marshes.—*O. J. Klotz*, 1882.

Sub-division.—The west part of this township is undulating prairie; the east part is rolling. Numerous sloughs occur, with good water, which dry up towards the end of summer. The soil is a light sandy loam, generally class 3. In some parts there is better soil—a clay loam—class 2. The township is fairly adapted for agriculture. No wood.—*P. Gosselin*, 1883.

19. *Outlines.*—West, sandy and gravelly prairie, with neither wood nor water. Rated class 4.—*J. Bignell*, 1882.

East, rolling prairie, with a clay soil. Class 2. No water, except a small pond in the south of Section 1.—*T. Drummond*, 1882.

Sub-division.—Undulating and rolling. Soil, half clay, half sandy loam, on subsoil of clay and sand, generally class 2, and well adapted for farming purposes. There are numerous sloughs, with good water, but which dry up towards the end of summer.—*P. Gosselin*, 1883.

20. *Outlines.*—North, the land is almost all second class, and the country very rough. At Section 32 begin the Rainy Hills, which extend to the western limit of the township. East, rolling prairie, with clay soil. Class 2. On Section 25 is a large alkaline lake, and in its immediate vicinity the land is rated class 4. There is no wood or fresh water.—*T. Drummond*, 1883.

West, the surface is generally undulating prairie, with a few sandhills on Section 7, and boulders in the south of 13. Soil, sand or gravel, and sand. Class 4. Neither wood nor water.—*J. Bignell*, 1882.

Sub-division.—Rolling prairie. Soil, clay loam. Classes 1 and 2. There is an alkaline lake, of nearly 500 acres, on Sections 23, 24, 25 and 26. There are some smaller alkaline ponds, and a large number of marshes, which dry as the summer advances. This township is well suited for agricultural purposes.—*P. Gosselin*, 1883.

21. *Outlines.*—South and east, the land is almost all second class, and the country is very rough. Sections 5 and 6 are in the Inner Rainy Hills.—*T. Drummond*, 1882.

Is rolling and hilly prairie, with sandy loam soil and clay subsoil. Hill tops and knolls generally gravelly, and covered with boulders. Probably better adapted for grazing than the raising of cereals.—*C. F. Miles*, 1882.

22. *Outlines.*—Nearly all broken by Red Deer River Valley and its banks and gorges, here over 300 feet high, in many places precipitous. Parts of the valley offer very fair facilities for grazing purposes; other parts, again, are nearly barren, having been covered with a white clay, washed down from the banks.—*C. F. Miles*, 1882.

East, the land is almost all second class, and the country is very rough. The Red Deer River crosses the line in Section 25. The banks at this point are 250 feet high. There seems to be cottonwood and poplar timber all the way along the valley in a narrow belt, except where there are cut banks on both sides.—*T. Drummond*, 1882.

- 23. Outlines.**—Rolling prairie, pretty well watered by numerous sloughs, in which the water is only slightly alkaline. Soil, clay loam to heavy clay. This township, for agricultural purposes, may be classed as second.—*A. W. McVittie*, 1882.

East, surface knolly and rolling. Soil, generally sandy loam, 10 to 15 inches deep. Subsoil, gravel and hardened clay. A little water and some small meadows. A saline creek, on its way to the Red Deer, crosses this township, with a south-easterly course.—*W. Ogilvie*, 1882.

Sub-division.—An alkaline creek, about 15 feet in width, crosses the township. The township is high and rolling, except in the vicinity of the valley of the creek, which is hilly, and about 150 to 175 feet deep below the surrounding country. The water is only slightly alkaline, and courses over a very stony bottom. The soil is generally a sandy loam, and the hills and hillocks are not, as usual, gravelly or stony, but grow a luxuriant crop of grass. There is no timber in the township.—*R. J. Jephson*, 1883.

- 24. Outlines.**—Surface rolling in the north and knolly and rough in the east. Soil, sandy loam, from 10 to 15 inches deep. Subsoil, generally, gravelly clay, hardened. Very little water. The saline creek mentioned in Township 23 was crossed in the north-west.—*W. Ogilvie*, 1882.

Generally, rolling prairie. There are numerous sloughs, which are slightly alkaline, dotted here and there. The soil varies from a clay loam to a heavy clay, and is generally class 2.—*A. W. McVittie*, 1882.

Sub-division.—Hilly, rolling prairie. Soil, a sandy loam, on sandy clay subsoil, generally class 2. The hills are slightly gravelly; and it is gravelly also along the creek valley from Section 31 to Section 4. The water of the creek is slightly alkaline. A lake on Section 15 is also alkaline, and the water in the marshes is indifferent. Luxuriant grass intermingled, with vetches, grows among the hills.—*R. J. Jephson*, 1883.

- 25. Outlines.**—Along the east boundary, going north, the 1st and 3rd miles are rolling, the 2nd and 4th undulating, and the remaining two hilly prairie. Soil, clay loam, 8 to 18 inches in depth, on a clay subsoil. Class 2. Several large watercourses occur toward the north, but they were all dry in the month of July. There is no wood.—*C. F. Miles*, 1883.

The southern portion, generally, possesses a rolling surface, with a deep sandy loam on a subsoil of gravelly clay. There is very little surface water. A saline creek passes down from the north part of the township. This stream is a tributary of the Red Deer River.—*W. Ogilvie*, 1882.

Sub-division.—Open, rolling and undulating prairie. Soil, rich clay loam. Classes 1 and 2, perhaps well down to No. 2 throughout. This is a good township for farming; plenty of good water, good soil; and hay marshes—though small in size—very numerous. No wood.—*F. Purvis*, 1883.

26. *Outlines.*—Rolling in the west, with little water, and rough and heavily-rolling eastwards, with a fair supply of surface water in the bottoms. Soil, clay loam. Class 2. An old trail to the Forks of the Red Deer crosses the north-east corner.—*C. F. Miles*, 1882.

Sub-division.—Rough, rolling prairie, well suited for grazing. Hay marshes and fresh-water ponds occur in nearly every quarter-section, and nearly all admit of easy drainage, if requisite. Soil, a dark clay loam. Class 2. A deep gully, with precipitous banks—between which runs a small alkaline stream—occupies the western part of the township, affording excellent shelter in winter for cattle.—*F. Purvis*, 1883.

27 *Outlines.*—High and undulating prairie, drained by Blood Indian Creek, which runs southerly through the township in an alkaline bed, containing pools of standing water. The soil is clay loam and rates second class.—*C. F. Miles*, 1883.

28. *Outlines.*—Rolling and undulating prairie. Soil, clay loam, 8 to 16 inches, on clay subsoil. Class 2. Fair supply of surface water.—*T. Fawcett*, 1883.

High and undulating prairie. Soil is clay loam, and rates second class. Blood Indian Creek runs southerly through the township. It contains pools of standing water, except early in the season. The water is slightly alkaline.—*C. F. Miles*, 1883.

29. *Outlines.*—Rolling prairie, clay loam soil, clay subsoil. Classes 1 and 2.—*J. K. McLean*, 1884.

South, rolling prairie, with numerous lakes and marshes.—*T. Fawcett*, 1883.

30. *Outlines.*—The eastern portion of this township is light and sandy. Class 2. Large alkali flats occur towards the west. Class 3.—*J. K. McLean*, 1884.

31. *Outlines.*—Undulating prairie; sand loam soil; sand subsoil. Class 2.—*J. K. McLean*, 1884.

32. *Outlines.*—The country along the north boundary is nearly level prairie, with a fair soil. Several marshes occur toward the west. There is no wood. A cart trail crosses the line on the eastern half of Section 32.—*E. Bray*, 1883.

Undulating prairie; sand loam soil; sand subsoil. Class 2.—*J. K. McLean*, 1884.

33. *Outlines.*—Undulating prairie; sand loam soil; sand subsoil. Class 2.—*J. K. McLean*, 1884.

South, nearly level prairie. A fair soil, and several marshes towards the west. No wood.—*E. Bray*, 1883.

34. *Outlines.*—Undulating prairie, very stony in places. Sand loam and clay loam soil; sand and clay subsoil. Second class.—*J. K. McLean*, 1884.

35. *Outlines.*—Rolling and undulating prairie, changing from second to first class going west. The south-west sections are occupied by a bay of a large lake.—*J. K. McLean*, 1884.

36 *Outlines.*—North, undulating prairie, cut up by deep ravines, with small creeks. Some good poplar is in the ravines, in occa-

sional bluffs, and also on the open prairie. Soil, first and second class.—*T. Kains*, 1883.

Rolling and undulating prairie. Classes 1 and 2. The meridian west of this township, for several miles, follows a ravine, in which there is a small creek running north.—*J. K. McLean*, 1884.

- 37. Outlines.**—Rolling prairie. The hills from Range 8 are wooded on their southern slopes. Ravines occupy the south-east half, and make the surface generally rough, and several deep coulees flowing north-east cut the plains about the foot of their slope. The soil is principally sandy loam, 8 inches deep, and the subsoil clay loam, or sand and gravel, on the alternate sections. Sections 25 and 36 consist of a clay flat. Water scarce.—*L. R. Ord*, 1883.

As seen from the southern boundary, this township appears to be generally undulating prairie, with many ravines containing poplar. The soil, in the southern part, is first and second class.—*T. Kains*, 1883.

- 38. Outlines.**—Rolling prairie, dotted with lakes and ponds, particularly in the north-west part. A range of hills rises to an elevation of 300 feet above the plains in the south-east corner of this township, and these are wooded on some of the northern slopes; otherwise, the surface is bare of timber. The soil is good in the northern sections, but, towards the south, becomes lighter and of poorer quality—generally a sandy loam, averaging second class.—*L. R. Ord*, 1883.

- 39. Outlines.**—Rolling land, with bluffs of poplar, thickest in the north-west, and becoming more scattered towards the south-east, where the country spreads into open plains. Numerous lakes and ponds dot the township. The soil is a sandy loam, some 10 inches deep, with clay loam subsoil, and ranks as class first.—*L. R. Ord*, 1883.

- 40. Outlines.**—North, the country is hilly, with deep lakelets. The line crosses Battle River, which was from 3 to 8 feet deep.—*C. A. Magrath*, 1883.

Heavy-rolling land, with numerous thick bluffs of poplar; the hollows generally occupied by lakes and ponds. Battle River flows from Section 19 to Section 33, in a valley about one and a-half to two miles wide and 300 feet deep, with clay banks, wooded, with occasional open patches. The river is about a chain wide and 18 inches to 3 feet deep, flowing over a mud and gravel bottom, at the rate of about two miles per hour. The soil is a sandy loam, 4 to 12 inches deep; subsoil, clay loam. Class 1. *L. R. Ord*, 1883.

- 41. Outlines.**—Battle River runs north-westerly to Section 30, thence northerly, the west boundary crossing it five times. The land is hilly and broken in the south-west and west with thick poplar and scattered stones. Classes from 3 to 4. Balm of Gilead and dense willows occur in many places along the banks of the river. In the east the surface is rolling or hilly, and thickly wooded with poplars. Numerous large ponds and sloughs, with willow, abound. The country, generally, is well adapted for grazing purposes. The

soil is clay loam or dark loam. Classes 1 and 2.—*J. F. Garden, 1884.*

South, hilly, with deep lakelets. Battle River, which was from 3 to 8 feet deep, flows northwards in the west of this township.—*C. A. Magrath, 1883.*

42. Outlines.—Battle River runs northerly along the west boundary, crossing it eleven times. Much poplar and willow borders the river. The soil is sandy loam in the valley, and classes from 3 to 4. In the east, the surface is gently-rolling or undulating, except in the north-east corner, where there are high sand ridges running north-west. Poplars and willows are dotted over the country, with a few ponds and sloughs in the hollows, with good grasses about them. The soil is a dark sandy loam. Class 2.—*J. F. Garden, 1884.*

43. Outlines.—Battle River runs across the township from the south-west to the north-east corner. The north-west portion is hilly land, with poplar and willow, and with numerous ponds and sloughs. Stones occur on some of the ridges and hills. Soil, sandy loam. Classes 2 to 3. On Section 18 a small, rapid creek runs easterly in a broad valley to the river. Some scattered bush was found in this vicinity. In the south-west the land is sandy, undulating and open, the classification of the township being from 2 to 3. The north-west half is well adapted for grazing.—*J. F. Garden, 1884.*

44. Outlines.—North, somewhat hilly, with numerous basins of water, which are not so plentiful as the east boundary is approached. Scattered clumps of poplar were met with, and timber appears both north and south of the line. The soil is clay loam, easily worked, and of first-class quality.—*T. Kains, 1883.*

The westerly sections are principally hilly and broken. There are numerous sloughs and ponds in the hollows, with willows about them. Small poplar in bluffs are also numerous. Good pasturage can be procured in this portion. The soil is black or sandy loam. Classes 2 to 3. In the north-east the surface is sandy, undulating and rolling, and falling easterly to Battle River, with large coulées running in the same direction. In Section 12 a large valley was crossed, extending westerly, which leads to the river. The south-east corner falls in the river valley. Poplar bluffs and willows are thinly scattered over the township. The soil is chiefly sandy loam, and classes from 2 to 3.—*J. F. Garden, 1884.*

45. Outlines.—A valley, through which flows a creek, extends in an easterly direction across this township. South of this valley the land is high and broken. To the north it is undulating, with many bluffs of poplar and some swamps. Soil, good.—*J. J. McArthur, 1883.*

The south is hilly, with numerous ponds among the hills. These ponds are, however, not so plentiful towards the east. Occasionally, patches of poplar and other timber appeared to the north of this line. The soil is a clay loam, and will rank first-class.—*Kains, 1883.*

- 46. Outlines.**—Is undulating, with many ponds and swamps. Poplar bluffs are numerous. Soil, of a good quality.—*J. J. McArthur*, 1883.
- 47. Outlines.**—Is undulating, with many ponds and marshes. Poplar bluffs are scattered throughout. In the western part the ponds are innumerable. Soil, good.—*J. J. McArthur*, 1883.
- 48. Outlines.**—Buffalo Coulee, running south-east, crosses the north-east corner. To the south of this coulee the country is high and undulating, with innumerable lakes and ponds, and thickly interspersed with poplar bluffs. Soil, good.—*J. J. McArthur*, 1883.
- 49. Outlines.**—Is rolling, covered with poplar bluffs and patches of willow scrub. Numerous deep pond holes occur, having a margin of willows. A lake of considerable size was met with on the north end of Section 12 and south of 13, which extends for nearly one mile both east and west of the Range Line. Bordering on this lake there is some poplar which is large enough for building. The water is good, and the soil first class, being sandy loam, on a clay subsoil.—*A. F. Cotton*, 1884.
- 50. Outlines.**—The south half is inclined to be hilly, with numerous bluffs of green and dead poplar of small size. In Section 13 a small creek crosses the line, the water of which is clear and good. The north half of this township slopes gradually north to the Vermillion River. The soil is a good, dark sandy loam, on a clay subsoil.—*A. F. Cotton*, 1884.
- 51. Outlines.**—West, rolling country, timbered with poplar. A small lake in Section 6, a marsh in 18, and a creek flowing east through a small ravine in 31. Alluvial soil, 2 to 6 inches deep; subsoil, gravel or sand. Class 3.—*M. Deane*, 1883.
- 52. Outlines.**—Along the west boundary the surface is rolling the first and second miles, going north, being timbered with poplar, the second and third open prairie, and the fifth and sixth covered with *brulé*, timber and windfalls. Vermillion Creek enters this township at the north-west corner of Section 7. Its width at this point is about 3 rods. There is no other surface water. The northern portion of the prairie interval is crossed by the trails, about half a mile apart. Alluvial soil, 3 to 6 inches deep; subsoil, generally sand or gravel. Class 3.—*M. Deane*, 1883.
- 53. Outlines.**—Centrally, east and west, this township is undulating. The soil is an excellent class 1. There are numerous ponds, swamps and marshes, and there are bluffs of poplar and willows. In the central west of the township there is a large lake, about one-third of a mile wide and a mile long.—*M. Alden*, 1879.
- The south-easterly one quarter is covered thickly with woods of small poplar, while the balance is made up of scrub poplar bluffs and openings. The surface varies from rolling to hilly, and is dotted with lakes and ponds of good water. The soil is either sandy loam or clay loam, the former predominating, and will average about class 2.—*E. Bray*, 1884.
- 54. Outlines.**—The land varies from rolling to hilly, is broken, to some extent, by lakes and ponds. The surface is mostly covered

with scrub and woods of poplar, with some openings. The soil is generally a good sandy or clay loam, except in the north-westerly corner, where it is swampy.—*E. Bray*, 1884.

- 56. *Outlines.***—North, heavily-rolling country, densely timbered. There are three lakes, one on Section 36, a second on 33, and the third on 31. The first is nearly half a mile wide, but is nearly all north of the line; the second is almost wholly south of it. Water in small ponds or marshes is plentiful all along the line, except on Section 32. The land is rated class 3.—*G. B. Abrey*, 1883.
- 57. *Outlines.***—The country is generally very hilly, with the exception of the north-eastern portion of the township, which is undulating. The timber in the southern portion consists of poplar, from 5 to 12 inches in diameter, and clumps and belts of spruce of the same diameter. The northern portion is timbered with bluffs of from 4 to 8-inch poplar. Egg Lake submerges the most part of Sections 2, 8, 29, 30, 31, 32 and 33, and is connected by a chain of sloughs with a lake of similar size in the adjoining township to the west. The water in Egg Lake is apparently stagnant, and unfit for use. The eastern half of Section 1 is also submerged by a lake, while there are other small lakes, but no running streams of any importance in the township. The alluvial soil varies from black sandy loam to black loam, and sometimes clay, and is underlaid by a gravelly subsoil. The Victoria and Fort Pitt trail passes through Section 36. The township is unsuited for agricultural purposes.—*C. A. Magrath*, 1884.
- 58. *Outlines.***—Country generally rolling throughout, with the exception of a few sections in the northern portion of the township, which may be classed as undulating. There are a few ranges of small hills in the township, and it is wooded with bluffs of 3 to 8-inch poplar and scrub willow. A considerable portion of Sections 4 and 5 is submerged by Egg Lake, while the country is otherwise well watered by small lakes without any apparent outlets. The Victoria and Fort Pitt trail, running along the north shore of Egg Lake, passes through Sections 3, 4, 5 and 6. The alluvial soil consists of about 9 inches of black loam, sometimes bearing traces of sand, and is underlaid by clay and gravel.—*C. A. Magrath*, 1884.
- 59. *Outlines.***—Is hilly country, broken by some large lakes. The hill tops are almost bare. In the valleys there is a great deal of fallen timber, of large size, which is now overgrown with small poplar and willow scrub. The soil is a good sandy loam.—*A. F. Cotton*, 1884.
- 60. *Outlines.***—Is gently-rolling country, covered, for the most part, with small poplar and willow scrub, with a few opening. Nearly all the timber is fire-killed. A few lakes and muskegs occur. The soil is a good sandy loam.—*A. F. Cotton*, 1884.

TOWNSHIPS WEST OF THE FOURTH INITIAL MERIDIAN.

RANGE X.

5. *Outlines*.—Undulating and rolling prairie. Soil, a sandy loam, with a gravelly clay subsoil in the west, and a lighter sandy loam, on blue clay, eastwards. A coulée, tributary to Pak-oghkee Lake, crosses the north of the township.—*C. E. Wolff*, 1883.
6. *Outlines*.—Undulating and rolling, and, in soil, similar to township 5.—*C. E. Wolff*, 1883.
7. *Outlines*.—Rolling prairie, broken on Section 36 by hills and coulées. Very dry, and the grass poor. Soil, gravelly loam, class 4, in the north west, and sandy loam, class 3, southwards. East, stony coulées on Sections 12 and 13, and in the northern half of the latter Long Lake—alkaline. Soil, gravel and sand north of the lake, and clay mixed with sand or gravel south of it. There is no timber, and fresh water is scarce.—*J. G. Sing*, 1883.
8. *Outlines*.—North, undulating prairie. Sandy loam soil. Some marshes. Good pasture.—*O. J. Klotz*, 1883.

Rolling prairie, extremely rough on Section 6, and broken by stony hills and coulées. Very dry, and the grass poor. Soil, sandy or clay loam in the north, and gravelly loam elsewhere. Rated classes 2 and 3 on all but Section 6—class 4.—*J. G. Sing*, 1883.
9. *Outlines*.—Rolling prairie, very dry, with scant growth of grass. Soil, clay, in the west, and gravelly in the east. All class 2. No timber or water.—*J. G. Sing*, 1883.

Sub-division.—East part, rolling prairie; west part, partly rolling and partly level. Soil, a brown sandy loam, of 12 inches deep, on a sandy and white clay subsoil, gravelly on the ridges. Ponds and marshes are scarce. Rainfall is said to be light during the summer in this section. No wood, but the proximity of coal deposits will supply fuel.—*C. LeBer*, 1883.

South, undulating prairie. Dry sandy loam soil.—*O. J. Klotz*, 1883.
10. *Outlines*.—Rolling prairie, very dry, and grass poor. Soil, for the most part, gravelly, with clay loam in the north-east and clay in the west. Class 2 throughout.—*J. G. Sing*, 1883.

Sub-division.—Generally high-rolling prairie, except in the north-west part. Soil, a clay loam, somewhat dry, but class 1. There is very little surface water, except in a small pond of fresh water on Section 35, near the Fort McLeod trail.—*C. Desjardins*, 1883.
11. *Outlines*.—Rolling prairie, with sandy loam soil. Class 2. A little stony towards the south-east, and generally very dry, and the grass poor.—*J. G. Sing*, 1883.

Sub-division.—Generally undulating prairie. Soil, clay loam of good quality, but water scarce. No wood.—*C. Desjardins*, 1883.

- 12. Outlines.**—Sections 36 and 35 are broken up by coulées, and in Section 34 the line strikes the Saskatchewan River. Up to this point the river flows in a north-easterly direction and is about 15 chains wide. Sections 33, 32 and 31 are rolling prairie. Soil, sandy loam.—*C. A. Magrath*, 1882.

West and east, rolling prairie, broken on Sections 7 and 6 by the hills and coulées extending from the South Saskatchewan, which crosses the west line on Section 6, and flows north-east to Section 34. Soil, sandy or gravelly loam, over clay. Class 2 in the north and 3 in the south.—*J. G. Sing*, 1883.

Sub-division.—The Saskatchewan River crosses the township in a diagonal direction, entering on Section 6 and leaving by 34. The country, for two miles on each side of the river, is much broken by deep ravines, but further inland is rolling and undulating. Soil, generally a sandy loam, somewhat dry and light, with a gravelly subsoil as it approaches the river. There are signs and deposits of coal along the river, but no exposures of beds.—*C. Desjardins*, 1883.

- 13. Outlines.**—Is rolling or undulating, dry prairie. Surface water only procurable from the Saskatchewan River. The soil is a fair sandy loam, somewhat gravelly on the elevations, and suitable for agricultural and cattle raising purposes, there being plenty of good grass. Sections 1, 2 and 3 are broken by the Saskatchewan River, 15 chains wide, 6 to 8 feet deep; banks 250 to 300 feet high. Seams of coal in the river banks in several places.—*P. R. A. Belanger*, 1882.

Sections 1, 2 and 3 are very much broken up by the Saskatchewan River, which flows across these sections in an easterly direction. Sections 4, 5 and 6 are rolling prairie, with a sandy loam soil.—*C. A. Magrath*, 1882.

Sub-division.—Undulating. Soil, clay loam on clay subsoil. Class 2. There are a few scattered ponds, but no hay lands. The south-east part is much broken up by ravines running to the Saskatchewan River, which courses through Sections 1, 2 and 3. The river is from 1,000 to 1,300 feet wide, and is deep in this portion of it. It gives the usual features to the surrounding country. There is no wood, and no indications of coal.—*J. Warren*, 1883.

- 14. Outlines.**—South, east and west, the surface is gently-rolling or undulating prairie. Alluvial soil, 5 inches deep; subsoil, sand. Class 2. No water or wood.—*P. R. A. Belanger*, 1882.

North, rolling prairie. Alluvial soil, 2 to 8 inches deep; subsoil, clay. Classes 2 and 3. No wood or water. There is a large dry slough over a mile and a half in length, most of which is on Section 32.—*J. A. Maddock*, 1882.

Sub-division.—All open prairie, and gently-undulating, with long easy slopes. Soil, clay loam, of 2 to 4 inches deep, on a clay subsoil; ground dry, and very little surface water, except a lake on the north part of Sections 31, 32 and 33. No wood.—*J. Warren*, 1883.

- 15. Outlines.**—Surveyed all outlines. Surface, rolling prairie, with 2 to 8 inches of alluvial soil, on a clay subsoil. Generally rated class 2, but on Sections 19, 30, the southern half of 31, and the adjoining semi-sections of 24 and 25, it is class 1, and there are occasional intervals where it is class 3. There is no wood or water. The C. P. R. runs diagonally across this township.—*J. A. Maddock, 1882.*

Sub-division.—Generally rolling prairie. Soil, a sandy and gravelly clay, hard and dry. The grass is short, poor and thin, except in occasional places. There are no creeks, and the only water is in the lake—a shallow, muddy sheet of water—largely covering Sections 4, 5 and 6. There are a few other sloughs, but the water in them is decidedly bad. No wood, and—at date, August, 1883—no settlers. The C. P. R. crosses the township, and Langevin Station has been located here.—*F. Lynch-Staunton, 1883.*

- 16. Outlines,**—North, level prairie, and very dry. The line crossed one pond, containing several acres of putrid water, from 1 to 2 inches deep.—*O. J. Klotz, 1882.*

West, east and south, rolling prairie, with 2 to 8 inches alluvial soil, on a clay subsoil. Generally rated class 2. No water or wood.—*J. A. Maddock, 1882.*

Sub-division.—Rolling prairie. Soil, a sandy and gravelly clay, on a clay subsoil. Grass poor and short, except in the bottoms. No timber and no water, except in a few small sloughs. No settlers.—*F. Lynch-Staunton, 1883.*

- 17. Outlines.**—The eastern half is high, hilly country, with sandy loam soil. The west boundary runs over a level prairie, and through a great deal of water. Section 7 is marshy, the soil is stiff blue clay, mixed with alkali. The soil, generally, on this line, is a good clay loam. The hills, from the east, fade out about a mile from this line. About one-sixth of this township is fit for farming purposes.—*H. C. Denny, 1882.*

South, level prairie, and very dry.—*O. J. Klotz, 1882.*

Sub-division.—A high, hilly country, except in the west and south parts, which are level prairie. The soil, generally, consists of a sandy loam—class 3—on a subsoil of sand. There are a few sections of clay loam of fair quality. Numerous sloughs were met with having good water. A marsh covers a large part of Sections 7, 18 and 19. About one-third of this township is fit for farming purposes.—*L. Gosselin, 1883.*

- 18. Outlines.**—Much of this township is submerged by a large lake, about four miles long and broad, containing good water. What land there is, is level and composed of sandy loam to the east and south of the lake, and clay loam to the west of same. An alkaline creek, about 2 feet deep, with a current of two miles per hour, empties itself into the lake from the west. The soil and situation are admirably adapted for farming purposes.—*H. C. Denny, 1882.*

Sub-division.—The south-east part of this township, for a mile broad, is very high, hilly prairie, the hills ranging from 50 to 150 feet high. The other parts are nearly all level prairie. In

the north-west there is a large muddy lake, about four miles long by two and a-half miles broad. To the west of this lake the soil is a good clay loam—class 2—and to the east of the lake it is a sandy loam. There are a few sloughs in the township, which contain good water. The land throughout is excellent for farming.—*L. Gosselin*, 1883.

- 19. Outlines.**—Surveyed east and west. Surface rolling and undulating, with some heavy-rolling in north-east. Water scarce.—*J. Bignell*, 1882.

Sub-division.—Partly undulating and partly rolling prairie, with a few level places. Soil, a clay loam generally, and rates class 2. There are some fresh sloughs which remain, but most of them dry during the summer. Tide Lake covers parts of Sections 5, 6 and 7. The water is fresh, but very muddy. There are no running streams. This township is well suited for farming.—*L. Gosselin*, 1883.

- 20. Outlines**—North, the land is almost all second class, and the country is very rough, being greatly cut up by ravines and gulches. The Rainy Hills extend as far west as Section 33. West of these hills is the beginning of Dead Man's Canon.—*T. Drummond*, 1882.

West and east, sandy and gravelly prairie, level and undulating. Neither wood nor water. Generally rated class 4.—*J. Bignell*, 1882.

Sub-division.—Rolling prairie, except in the south-east, where it is hilly, being known as the "Inner Rainy Hills." The north-east part is heavy-rolling prairie. The soil, generally, is a sandy loam. Class 3. There are a number of marshes, but all dry up during the summer, except the largest ones. There are no running streams, and no wood is to be found. No settlers yet.—*L. Gosselin*, 1883.

- 21. Outlines.**—The south-east half of the township is a rolling and hilly prairie, with sandy loam soil and clay subsoil. The greater part of the north-east quarter may be rated as first-class. About 30 per cent. of the township—the central part, which is broken by the Red Deer River and its ravines—is of very little value. A coal seam was noticed.—*C. F. Miles*, 1882.

South, the land is second class and the country is very rough.—*T. Drummond*, 1882.

Sub-division.—The Red Deer River enters on Section 7 and leaves by 34, and is 250 to 300 feet below the prairie level. The banks are broken by deep indents, and are precipitous, but the washouts are less frequent and extensive than in Township 21, Range 11. West of the river the surface is level or slightly undulating; east of the river it is more rolling, and even hilly, especially along the south and east sides, with sloughs in the valleys and gravel on the ridges. The soil is a sandy loam on a clay subsoil. In the narrow valleys and slopes along the river the soil is poor washed clay and sand, supporting a fringe of jungle here and there, only fit for fuel. The river, in spring, carries a large volume of water, but is shallow in fall. Large

pieces of coal were found scattered along the river, being brought down by the current; but no coal—*in situ*—was visible in the vicinity.—*J. A. Snow*, 1883.

- 22. Outlines.**—West and north, gently-undulating prairie, with a few marshes in the north, but very little surface water westwards.—*A. W. McVittie*, 1882.

Along the east boundary the surface is rolling and hilly prairie, being broken by the Red Deer River, which crosses the line on the south half of Section 24, where it is about one-quarter of a mile wide. Its banks are covered with dense willow. The soil is generally a sandy loam, 12 inches deep, on a clay subsoil. Rated classes 1, 2, 3 and 4, according as the country is more or less broken.—*C. F. Miles*, 1882.

Sub-division.—The Red Deer River enters this township on Section 3, and leaves by 24, is 200 to 250 feet below prairie level, has precipitous banks, deeply furrowed by ravines and wash-outs, extending inland from one-quarter of a mile to two miles; has an average width of 16 chains, and banks of clay, alternating with sandstone of various thicknesses and density, which latter is worn by the action of the water into strange shapes and figures. The banks support a fringe of sage bush and a jungle of thorn cherry and bull berry, with an occasional whitewood tree. The river carries a large volume of water in spring, but is only 2 or 3 feet deep in September, and full of quicksand bars. The township, generally, is undulating or rolling prairie, with a sandy loam soil on a clay subsoil, very uniform in character. On Sections 17 and 13 surface boulders are common, with gravelly ridges.—*J. A. Snow*, 1883.

- 23. Outlines.**—Rolling prairie, pretty well watered by numerous sloughs, in which the water is only slightly alkaline. Soil, clay loam to heavy clay. This township, for agricultural purposes, may be classed as second.—*A. W. McVittie*, 1882.

Sub-division.—Open prairie, either rolling or undulating, with sloughs in the valleys, containing good water. The soil is a sandy loam, from 2 to 18 inches deep, resting on a gravelly clay subsoil. The growth of grass was fair and, in many places, suitable for hay.—*J. A. Snow*, 1883.

- 24. Outlines.**—North, surface rolling and knolly. Soil, generally, sandy loam, sometimes a clayey loam, from 10 to 15 inches deep; subsoil, hard clay. Some grassy ponds of fresh water.—*W. Ogilvie*, 1882.

Rolling prairie, dotted with numerous small marshes, the water of which is only slightly alkaline. The soil is a clay loam and a heavy clay. Generally class 2.—*A. W. McVittie*, 1882.

Sub-division.—At the time of survey (end of July) no rain had fallen for six weeks, yet the water was abundant and good in the sloughs and small ponds. The surface is generally rolling, with easy slopes; the soil a sandy loam, from 1 to 18 inches deep, resting on a hard clay subsoil, mixed with rounded pebbles, and apparently impervious to water. On the tops of the swells the surface is gravelly and, in places, strewn with boulders. A stream,

10 feet wide, crosses Sections 34, 35, 26, 25 and 24. No wood.—*J. A. Snow, 1883.*

- 25. Outlines**—Surveyed west and east. Undulating, with a few ravines, marshes and ponds. A large lake submerges portions of Sections 7 and 18.—*C. F. Miles, 1882.*

Surface generally rolling, and sometimes knolly, with soils of sandy and clay loams on a subsoil of hard clay. A few fresh grassy marshes.—*W. Ogilvie, 1882.*

Sub-division—Rolling and undulating prairie, with sandy and clay loam soils on a clay subsoil. Good water is scarce, excepting in two lakes in the south-west corner. Two creeks, containing alkaline water, run across the township in a southerly direction. The soil is good for agriculture, except for its lack of moisture. No wood.—*F. Purvis, 1883.*

- 26. Outlines.**—West and east, undulating, with a clay loam soil. Class 2. A few creeks, which dry up soon, in the west; but no surface water eastwards.—*C. F. Miles, 1882.*

Sub-division.—Undulating prairie. Soil, a clay loam. Generally class 2, but lacking in moisture, which will prove a serious drawback to its settlement. No wood.—*F. Purvis, 1883.*

- 27. Outlines.**—Undulating prairie. Soil, clay loam, with clay subsoil. Rates second class.—*C. F. Miles, 1883.*

- 28. Outlines**—North, undulating and rolling prairie. Soil, clay loam, Generally classes 2 and 3. Many marshes in some places.—*T. Fawcett, 1883.*

Undulating prairie. Soil, clay loam, with clay subsoil. Rates. second class.—*C. F. Miles, 1883.*

- 29. Outlines.**—South, rolling prairie, with numerous lakes and marshes.—*T. Fawcett, 1883.*

Rolling prairie. Clay loam soil; clay subsoil. Classes 1 and 2.—*J. K. McLean, 1884.*

- 30. Outlines.**—Undulating prairie, broken on the east side by alkali flats, becoming better towards the west. Classes 2 and 3.—*J. K. McLean, 1884.*

- 31. Outlines.**—Rolling and undulating prairie; sandy on the east side, changing to clay towards the west. Class 2.—*J. K. McLean, 1884.*

- 32. Outlines.**—Along the north boundary the surface is nearly level prairie, and the soil 2nd and 3rd class. Small marshes occur at intervals along the central sections, and in the west there are two or three large ponds. There is no wood.—*E. Bray, 1883.*

Rolling and undulating prairie. Soil class 2. No wood.—*J. K. McLean, 1884.*

- 33. Outlines.**—The south is level, and the soil 2nd and 3rd class. Surface water is plentiful, but there is no wood.—*E. Bray, 1883.*

Undulating prairie. Sand loam soil on a sand and clay subsoil. Class 2. A large lake occupies the north-eastern portion of this township. The water is fresh, but extremely muddy.—*J. K. McLean, 1884.*

- 34. Outlines.**—Undulating prairie. Sand loam soil ; sand and clay subsoil. Class 2. The southern portion is almost entirely occupied by a large lake, the water of which, although soft and sweet, is so muddy as to be unfit for use.—*J. K. McLean*, 1884.
- 35. Outlines.**—Rolling prairie. Sand and clay loam soil ; clay subsoil. Chiefly class 1. A large muddy lake occupies the southern portion.—*J. K. McLean*, 1884.
- 36. Outlines.**—North, open, undulating prairie, interspersed with ponds and grass swamps, and with occasional alkaline spots. For the most part, the soil is first class, although here and there are spots of second class land.—*T. Kains*, 1883.
- Rolling and undulating prairie. Numerous fresh-water ponds were seen. Clay loam soil ; clay subsoil. Classes 1 and 2.—*J. K. McLean*, 1884.
- 37. Outlines.**—Open prairie, generally rolling in the west part, but becoming more uneven towards the east line. Generally dry, with a few ponds and sloughs. The soil, in the former sections, is a clay loam, some 10 inches deep, with clay loam subsoil, and is first class land ; but towards the east becomes lighter and more sandy. It would, however, rank as first class, the vegetation being rich.—*L. R. Ord*, 1883.
- Surface water is in fair supply in ponds and marshes, some of the latter of which are grassy. There are occasional alkaline spots to be found. The soil, as a rule, is first class, but like other land, a proportion of second class land appears in patches.—*T. Kains*, 1883.
- 38. Outlines.** Gently-rolling prairie, bluffy towards the northern boundary, but generally open. A few ponds dot the surface. The soil is excellent. The southern part is a clay loam, and towards the north a black sandy loam, some 12 to 15 inches deep, with a clay loam subsoil, and well fitted for agriculture.—*L. R. Ord*, 1883.
- 39. Outlines.**—Rolling, bluffy land, with numerous ponds and sloughs. Towards the western portion there are fewer ponds, and the bluffs are thicker and heavier. Soil, generally a sandy loam, 10 to 12 inches deep, with clay loam subsoil, and well fitted for agriculture. Ranks as class first. Battle River flows through Sections 31 and 32 into the next township.—*L. R. Ord*, 1883.
- 40. Outlines.**—North, the country is hilly, with a gradual slope towards Battle River. Deep lakelets are interspersed among the hills. This range is well wooded with poplar in bluffs. Soil, first class.—*C. A. Magrath*, 1883.

Is crossed by Battle River from Sections 5 and 6 to Sections 24 to 25, in a valley some 330 feet deep and one and a-half miles wide. The remainder of the township is broken by deep ravines flowing into the river. To the north-west of the latter the land is generally open, with scattered bluffs, in which the large trees have been fire-killed and are now standing in dense brush. South-east of the river the land is heavily-rolling, and covered with thick bluffs of green poplar, some of the trees attaining a fair size. The soil is a sandy loam, 10 to 12 inches deep, with generally a

clay loam subsoil, and, excepting parts in the valleys and hill tops, would rank as first class.—*L. R. Ord*, 1883.

- 41. Outlines.**—West, rolling prairie, with numerous poplar bluffs. Several lakes in Sections 6, 7, 18, 19 and 30; also hills in southern half of Section 7.—*L. R. Ord*, 1883.

East, hilly and rolling prairie, much broken by the valley of Battle River, which crosses this line at several points in Sections 25 and 36. Marshes appear in Sections 1 and 12, also hills in 1, 12, 13 and 24. Wood is plentiful, especially on banks of river.—*J. F. Garden*, 1884.

The general surface of the country is hilly, with an eastward slope towards Battle River, the valley of which lies along the eastern boundary. The intersections of the hills are filled with deep ponds, and the surface of the country is covered with poplar bluffs. The soil is first class.—*C. A. Magrath*, 1883.

- 42. Outlines.**—West, rolling prairie. Poplar bluffs. Sections 30 and 31 are much broken by a valley about 40 chains wide, which is traversed by a small creek. Lakes in 7 and 18; also a marsh, from 8 to 10 chains wide, in Section 7.—*L. R. Ord*, 1883.

East, hilly and rolling prairie, broken by the valley of Battle River, which crosses line at points in Sections 1, 12, 25 and 36. Hills appear in Sections 13, 24, 25 and 36. Poplar and willow.—*J. F. Garden*, 1884.

- 43. Outlines.**—West, prairie, very rough and broken. Hills in Sections 6, 7, 18, 19 and 30; also a lake in 6, and one situated on the line between Sections 6 and 7. Scrub on 6, 19 and 30.—*L. R. Ord*, 1883.

East, hilly and rolling prairie, with numerous poplar and willow sloughs. Good grazing in the hollows. Lakes are situated in Sections 1, 12 and 24; also a creek, having high banks, course eastward, in Section 13. Hills appear in every section along the line. Poplar occurs only in small quantities.—*J. F. Garden*, 1884.

- 44. Outlines.**—West, rolling prairie. Hills in Sections 6, 1, 18 and 19 and 30. Sections 6, 7, 18 and 19 are traversed by a creek flowing southward. A lake about 15 chains wide, intersects the northern half of Section 30; also an old trail. Scattered poplar in 6, 18 and 30.—*L. R. Ord*, 1883.

East, hilly and rough, broken land, with willow sloughs and poplar brush. A lake, from 15 to 18 chains wide, in Section 36; also others of smaller dimensions in 1, 12, 24 and 25.—*J. F. Garden*, 1884.

The whole of the northern portion of the township is broken by a large ravine, about 100 feet deep, and its branches. The sides of this ravine are sloping, and in places, thickly dotted with poplar of fair size, and numerous ponds of strong alkaline water are scattered throughout its bottom. The soil is sand and clay loam, but stony in certain places.—*T. Kains*, 1883.

- 45. Outlines.**—High, undulating, and much broken by ponds and lakes. There are many poplar bluffs. Soil good.—*J. J. McArthur*, 1883.

The southern part of this township is broken by a large ravine, described in Township 44 of this Range. The soil consists of sandy and clay loams, sometimes stony.—*T. Kains*, 1883.

- 46.** *Outlines.*—High, undulating, and much broken by ponds and lakes. There are many poplar bluffs. Soil good.—*J. J. McArthur*, 1883.
- 47.** *Outlines.*—High and undulating, with innumerable lakes and ponds. Soil good, and vegetation luxuriant.—*J. J. McArthur*, 1883.
- 48.** *Outlines.*—High and undulating, with innumerable lakes and ponds. Thickly interspersed with bluffs of poplar. Soil good, and vegetation luxuriant.—*J. J. McArthur*, 1883.
- 49.** *Outlines.*—Is hilly in the south half and much broken by innumerable deep ponds, which, however, are less numerous in the north half. The township is about one-half covered with poplar bluffs, the timber in which seldom exceeds 4 inches in diameter. In the south end of Section 36 is a ravine running north-west and south-east, about 20 chains wide, containing a continuous grass muskeg. The soil is a rich dark loam, 12 to 14 inches deep, on a subsoil of clay or clay loam.—*A. F. Cotton*, 1884.
- 50.** *Outlines.*—Is a high, rolling country, with scattered bluffs of small poplar and willow, and a few ponds in the south half. In Section 24 a large muskeg occurs, through which runs a deep creek, 50 links wide. Eastward, towards the Vermillion River, and north of this muskeg, the timber is all fire-killed. The soil is a good sandy loam, and some parts of this township would rank as first class farming land.—*A. F. Cotton*, 1884.
- 51.** *Outlines.*—East, prairie, covered with bush. A branch of the Vermillion River, flowing in a north-easterly direction, and which has its source in a lake about ten miles to the south-west, crosses the township and passes out through Section 36. This line intersects a small lake in Section 1, and a ravine between 12 and 13. There are several marshes and ponds to the west of the township.—*M. Deane*, 1883.
- 52.** *Outlines.*—West, rolling prairie, considerably broken by lakes and ponds. A lake, about one-half mile wide, in Section 7, and a smaller one in 18. Several ponds in 6, 7, 18, 30 and 31; also a small creek, course west, in 30. Sections 18, 19 and 30 are well wooded. East, rolling prairie, with bush in Sections 1 and 12. Burnt bush in 25 and 36. The Vermillion River, passing through a valley a little over one mile wide, crosses on the line between Sections 12 and 13. Two trails in Section 24; also another in 13.—*M. Deane*, 1883.
- 53.** *Outlines.*—Surveyed the east boundary. The Vermillion River runs to the south-east through this township. West of this river the country appears to be rough, and nearly all covered with scrub and poplar woods. East of the river the land is sometimes hilly, but usually rolling, and is only partly covered with scrub and occasional bluffs of poplar. The soil is generally second or third class.—*E. Bray*, 1884.

- 54. Outlines.**—Surveyed the east boundary. The land appears to be rolling, and in some places hilly, and is mostly covered with scrub and woods of small poplar. In the north-easterly corner the land is swampy. The soil is second and third class.—*E. Bray*, 1884.
- 57. Outlines.**—The eastern portion is generally very hilly. Towards the west the country partakes of a more rolling or undulating character. The eastern half is densely timbered with 4 to 8-inch poplar, and clumps and belts of 5 to 12-inch spruce. The northern and western portions are wooded with bluffs of 4 to 8-inch poplar and willow. Occasional birch trees may be found. A large lake, connected by a chain of sloughs with Egg Lake, submerges about one-seventh of the township. There are several other lakes, without any apparent outlets. The surface soil consists chiefly of about 8 inches of black loam, over clay, which bears traces of gravel. This may be classed 2 as an agricultural township.—*C. A. Magrath*, 1884.
- 58. Outlines.**—Country generally rolling, with bluffs of 3 to 8-inch poplar, also high, grey and scrub willow, and abundantly watered by numerous small lakes. The alluvial soil consists of black loam, varying in depth from 4 to 12 inches, and underlaid by clay. The Victoria and Fort Pitt cart trail crosses from Section 6 to Section 12. There are also a few old trails. This township may be classed second rate for agricultural purposes.—*C. A. Magrath*, 1884.
- 59. Outlines.**—Is hilly country, broken by lakes and ponds. The hill tops are generally bare, while in the valleys there is a dense growth of scrub. The trees have been all fire-killed. The soil is a good sandy loam.—*A. F. Cotton*, 1884.
- 60. Outlines.**—Is hilly country, covered with small poplar and willow. Some fair sized lakes occur in this township, which are fringed with spruce. The soil is a good sandy loam.—*A. F. Cotton*, 1884.

TOWNSHIPS WEST OF THE FOURTH INITIAL MERIDIAN.

RANGE XI.

5. *Outlines*.—South, dry, undulating prairie, somewhat stony. Vegetation thin. A small marsh in Section 4.—*O. J. Klotz*, 1883.

The east is undulating and rolling. Soil, a sandy loam, on a gravelly clay subsoil.—*C. E. Wolff*, 1883.

6. *Outlines*.—The east is undulating and rolling. Soil, sandy loam, on a gravelly clay subsoil.—*C. E. Wolff*, 1883.
7. *Outlines*.—Eastwards, rolling prairie, very much broken, on Section 36, by deep coulées. Soil, gravelly loam, class 4, on the two northern sections, and sandy loam, class 3, on the rest. Very dry, and grass poor.—*J. G. Sing*, 1883.
8. *Outlines*.—Along the east boundary the surface is rolling, except on Section 1, which is extremely rough, and broken by stony hills and coulées. Soil, sandy or clay loam in the north, and gravelly loam on the rest. Rated class 2 on all, except Section 1, where it is class 4.—*J. G. Sing*, 1883.
9. *Outlines*.—West and east, surface rolling prairie, broken, on Sections 7 and 18, by Forty-Mile Coulée, resting in which is Yellow Lake. For a couple of miles on the north side of the lake the land rises gradually, and is rather stony. Soil, principally, sandy loam in the west and clay in the east. Class 2 throughout.—*J. G. Sing*, 1883.

South, level prairie, intersected on its western part by the Forty-Mile Coulée. This coulée is a valley of about a mile in width, in which are a succession of marshes and lakes, all connected during high water. Into this coulée smaller and shorter ones run from each side. The bottom of the valley is alkaline.—*O. J. Klotz*, 1883.

Sub-division.—Partly rolling and partly a level, sloping prairie. Soil, a dark brown loam, with a sand and clay subsoil. The soil on the hills and ridges is more or less gravelly. The south-western part, on the banks of the Forty-Mile Gully, is stony. Water is scarce, and was only found in a lake and a marsh in the south-west. The land is excellent for farming purposes, under a favorable rainfall.—*C. LeBer*, 1883.

10. *Outlines*.—All rolling prairie. Very dry, and the grass poor. Soil, clay in the east, and sandy loam in the west. All class 2. The McLeod trail crosses Section 30. No water or timber. Section 31 is stony.—*J. G. Sing*, 1883.

Sub-division.—Rolling prairie. Soil, sandy loam, on a clay and sand subsoil. Class 2. Water is very scarce. The land is good for farming purposes, but is dry, except under a favorable rainfall, the want of which is often felt. There is no wood; but

for the purposes of fuel coal can be obtained cheaply.—*C. LeBer*, 1883.

- 11. Outlines.**—Rolling prairie, broken at intervals by deep coulées, the banks of which are, as a rule, stony. The Saskatchewan River passes through the township. The banks are very high, and contain an abundance of coal. Away from the river water is scarce, and the grass is poor. Soil, sandy loam, class 2, but at intervals—south of the river—there is much class 3.—*J. G. Sing*, 1883.

Sub-division.—Undulating prairie. Soil, clay and clay loam, on subsoil of clay. Class 1. This township is generally well adapted for agriculture, although surface water is somewhat scarce beyond the limits of the Saskatchewan River. This river enters the township in Section 18, courses east to 15, when it courses north and leaves in 35. It is about 600 feet broad and 7 to 8 feet deep, with banks from 50 to 100 feet high. No wood. The McLeod trail crosses the township—*L. Grondin*, 1883.

- 12. Outlines.**—North, the country is rolling prairie. Soil, clay loam.—*C. A. Magrath*, 1882.

East and west, rolling prairie, broken in Sections 12 and 1, by hills and coulées, which extend from the South Saskatchewan, which, entering the township near the south-east corner of Section 3, and continuing northward for a couple of miles, turns to the southeast, and crosses the east line in Section 1. Soil, sandy or garvelly. Class 2 in the north and west and 3 in the south-east.—*J. G. Sing*, 1883.

Sub-division.—The Saskatchewan River breaks in upon the four south-easterly sections, giving a rough character to this portion of the township. The remainder of the township is undulating, with a good clay loam soil. Class 1, but rather dry. There is very little surface water beyond the river, and no wood. It is adapted for agriculture.—*L. Grondin*, 1883.

- 13. Outlines.**—North and west, rolling, dry prairie. No water.—*J. A. Maddock*, 1882.

East, dry and rolling prairie.—*P. R. A. Belanger*, 1882.

South, rolling prairie. Soil, clay loam.—*C. A. Magrath*, 1882.

Sub-division.—Gently-undulating prairie, with long, easy slopes to the south. Soil, a clay loam, of 3 to 6 inches, on clay subsoil. Class 2. Water very scarce, and no wood.—*J. Warren*, 1883.

- 14. Outlines.**—North, west and south, undulating or rolling prairie. Scarcely any surface water, and no growth of wood.—*J. A. Maddock*, 1882.

East, rolling prairie. No water on this line.—*P. R. A. Belanger*, 1882.

Sub-division.—Generally level. Soil, clay loam, of 3 to 4 inches deep, on a clay subsoil. There is very little surface water, and no indications of wood.—*J. Warren*, 1883.

- 15. Outlines.**—On all the boundaries it is rolling prairie. The Canadian Pacific Railway crosses in the western half of Section 36. There is a large clear-water pond in 34, and a marsh in 31. West,

the arms of a large shallow slough were crossed in Sections 7 and 18. Generally, however, the township is a dry one.—*J. A. Maddock*, 1882.

Sub-division.—Undulating prairie. Soil, hard sandy clay, on a subsoil of clay. The grass is thin, short and poor, hardly making a sod. There are some sloughs, in several of which the water, though inferior, is drinkable. There is no timber of any kind, and no settlers.—*F. Lynch-Staunton*, 1883.

- 16. Outlines**.—North, undulating prairie, of gravelly clay loam, with some water.—*O. J. Klotz*, 1882.

West, east and south, slightly undulating prairie. The line of the C.P.R. reaches from Section 1 to 31. There are marshes in 6 and 30. The marsh in 30 is quite extensive, but dries early. There is also a large clear-water pond in 3, and a marsh in 6.—*J. A. Maddock*, 1882.

Sub-division.—Generally rolling prairie. Soil, a hard sandy clay, in places stony and gravelly, especially in the north. The grass is poor and thin. The lakes are shallow sloughs of surface water, and small sloughs are numerous, but there are no running streams or springs. No wood, and no settlers. The C.P.R. has Kininvie Station here.—*F. Lynch-Staunton*, 1883.

- 17. Outlines**.—Is composed of undulating prairie, interspersed with numerous sloughs. The soil is good sandy loam. This township is very suitable for farming purposes.—*H. C. Denny*, 1882.

South, undulating prairie, with gravelly clay loam, with some water.—*O. J. Klotz*, 1882.

Sub-division.—Generally undulating prairie, except in the middle part, where it is rolling prairie. Soil, a good sandy and clay loam. Class 2. Numerous sloughs, with good water, in the township, which is suitable for farming purposes. No wood.—*L. Gosselin*, 1883.

- 18. Outlines**.—West and east is rolling prairie, with numerous sloughs, most of which are dry at this season of the year—July–August. The soil is good sandy loam.—*H. C. Denny*, 1882.

Sub-division.—Rolling prairie, broken in many sections by numerous sloughs, most of which dry up as the summer advances, and all contain good water. In Sections 19 and 20 there is a fresh-water pond of 30 acres in area. The soil is a good sandy loam, classes 2 and 3, and, on the whole, is well adapted for farming.—*L. Gosselin*, 1883.

- 19. Outlines**.—West and east, this township is all undulating and dry prairie.—*J. Bignell*, 1882.

Sub-division.—Mostly undulating prairie, with some sections rolling. The soil is a good clay loam. Classes 1 and 2. The south-west part is a little stony. There are some fresh-water sloughs, but most of them dry up during summer. There is a large marsh between Sections 21 and 28. In the north there is some broken prairie. Numerous ravines in Section 31.—*L. Gosselin*, 1883.

- 20. Outlines**.—North, the land here is of little use for agricultural purposes, being too much broken by ravines, which are very numerous, with precipitous banks, about 400 feet high. They

run for a long distance out from the river. This place is known as Dead Man's Canon, and is very well named.—*T. Drummond*, 1882.

This township, both west and east, is prairie, with the northern half much broken by ravines. A few also appear in Sections 6 and 7. A marsh, about 20 chains wide, in northern half of Section 31. Neither wood nor water.—*J. Bignell*, 1882.

Sub-division.—Generally undulating prairie, much broken by gullies and ravines from 50 to 200 feet deep, which form a strong obstacle to farming. The soil, generally, is a clay loam, and rates class 2. Surface water is very scarce.—*L. Gosselin*, 1883.

- 21. Outlines**.—The north-east half may be rated as first class rolling and undulating prairie. Soil, sandy loam; clay subsoil. Nearly the whole of the south half is unfit for any agricultural purposes whatever. The river valley, varying in width from one to three miles, is here over two miles from bank to bank, and has assumed a very extraordinary and rough appearance. The banks are over 300 feet high, and consist of layers of clay, sand, sandstone of various degrees of hardness, and clay slate, in the upper strata, of which there are large petrifications. No ingress or egress to or from the valley can be had here with a wheeled vehicle for many miles east or west.—*C. F. Miles*, 1882.

The Red Deer River runs through this township near the south limit, with precipitous banks of sandstone about 400 feet high, cut up by the weather into needles, cones, caves, &c., &c. A few deep coulées on the north side of the river. Numerous belts and patches, frequently covering an area of over half a square mile, composed of cottonwood, up to 24 inches in diameter, occur along the river; also a few small poplar, with scrub cherry, &c.—*A. W. McVittie*, 1882.

The Red Deer River runs through the southern portion of this township. The land here is of little use for agricultural purposes, the place being known as The Deadman's Canon, and almost inaccessible. I have already described it in Township 20.—*T. Drummond*, 1882.

Sub-division.—The Red Deer River enters by Section 7 and leaves by 12, and forms the centre of what is known as the Dead Lodge Canon. Here the bed of the river is 300 feet under the prairie level; the land on both sides is broken by precipitous banks and extensive washouts, leaving conical clay hills, capped with sandstone, with deep and sharp ravines and gulches between them, nearly destitute of vegetation. Most of the south half of the township bears this broken character, and is of little value. The north half of the township is level or slightly undulating, with a uniform sandy loam soil on a clay subsoil—class 2—and having a fair growth of grass. There is no wood, except a fringe of jungle along the river here and there.—*J. A. Snow*, 1883.

- 22. Outlines**.—Rolling prairie, pretty well watered by numerous sloughs, the water of which is only slightly alkaline. For agricultural purposes the township may be classified as second class. Soil, clay loam to heavy clay.—*A. W. McVittie*, 1882.

Sub-division.—Open prairie. The north-easterly part is rolling, and in some places hilly, but the south-western part is level, or very slightly undulating. The soil is invariably a sandy loam, varying in depth from 2 to 18 inches, and resting on a subsoil of clay, or clay and gravel. There are no running streams in the township, and the sloughs are dry.—*J. A. Snow, 1883.*

- 23. Outlines.**—Surveyed all outlines. Rolling prairie, watered by numerous sloughs, slightly alkaline. Berry Creek also flows through the township. The soil ranges from clay loam to a heavy clay, and rates class 2.—*A. W. McVittie, 1882.*

Sub-division.—Open prairie, either rolling or gently-undulating. Soil, a light sandy loam, from 2 to 18 inches deep, on a grey clay subsoil. The grass was short, owing, no doubt, to the exceptionally dry season (1883)—no rain having fallen from the 10th of June until the 15th of September. There is no wood. The only stream in the township is a branch of Berry Creek, entering on Section 36 and leaving by Section 6. This stream was dry, except in pools, by midsummer.—*J. A. Snow, 1883.*

- 24. Outlines.**—North, surface rolling and knolly. Soil, sandy loam. On westerly side a large grassy fresh-water pond extends southwards about two or three miles.—*W. Ogilvie, 1882.*

Rolling prairie, pretty well watered by numerous sloughs, the water of which is only slightly alkaline. Berry Creek also flows through the township. For agricultural purposes the township may be classified as second class. The soil is clay loam to heavy clay.—*A. W. McVittie, 1882.*

Sub-division.—Generally rolling and entirely open prairie. Soil, a sandy loam over a hard clay subsoil. There was grass in many places suitable for making hay. The township is well watered by a tributary of Berry Creek and two branches, in all of which there was good water in the pools along their courses. There are also several ponds of good water, and also a large lake in Sections 29 and 32. No wood.—*J. A. Snow, 1883.*

- 25. Outlines**—Surveyed west and east. It is all undulating and open prairie, with sandy and clay loam soils. Water is in fair supply in the east centre and south-west. Elsewhere it is scarce, except in Berry Creek, which flows along the easterly tier of sections.—*C. F. Miles, 1883.*

South, surface rolling and knolly. Soil, sandy loam. In Section 3 there is a fine large fresh-water creek, 30 feet wide, and very deep. In Section 5 is a large, grassy fresh-water pond extending nearly a mile north of the line and more than two miles south of it.—*W. Ogilvie, 1882.*

Sub-division.—High, dry, open prairie. Soil, sand loam and clay loam. Class 2. There is plenty of fresh water in the sloughs and marshes, which lasts through the summer. An alkaline creek runs through the eastern part, with plenty of water. No wood. This township is very suitable for settlement.—*F. Purvis, 1883.*

- 26. Outlines.**—West and east, undulating prairie, almost unbroken on the west, except by a ravine traversed by a small creek, and a small marsh on Section 18. No wood. On the east there are

ravines in Sections 1, 12, 24 and 36, some having dry water-courses. There is a small creek running south-west, and small marshes appear in 24 and 25.—*C. F. Miles*, 1883.

Sub-division.—Rough, rolling prairie, suitable for settlement. Good fresh water in abundance. Small hay marshes are numerous. Soil, a clay loam on a clay subsoil. Class 2. The grass is good, and fine for grazing.—*F. Purvis*, 1883.

27. Outlines.—Undulating prairie, with a number of shallow ponds and lakelets in the north half. These contain alkaline water. The soil is clay loam, with clay subsoil. Rates second class.—*C. F. Miles*, 1883.

28. Outlines.—North, rolling prairie. In Section 36 the line crosses and re-crosses a small stream, several times. In Sections 32 and 33 two other streams were crossed, their course being south-west, towards the Red Deer River. The water was good, but with slight indications of alkali.—*T. Fawcett*, 1883.

Undulating prairie, sloping west to Berry Creek, which runs south-westerly through the north-west half of the township. The creek here is dammed up by beaver, in many places, causing pools of 5 and 6 feet in depth between the clay banks, which, in many places, rise 10 feet in height. The soil is clay loam, with clay subsoil, and rates second class.—*C. F. Miles*, 1883.

29 Outlines.—Rolling prairie. Clay loam soil; clay subsoil. The south-west portion is class 3, the remainder being class 2.—*J. K. McLean*, 1884

South, undulating and rolling. Soil, clay loam. Classes 2 and 3. Several creeks of good water course through the north. Marshes are in fair supply, and a considerable growth of cactus appears in places. No wood.—*T. Fawcett*, 1883.

30 to 35. Outlines.—These townships are all rolling and undulating. Nos. 30 and 31 have sandy and clay loam soils over a clay subsoil. Nos. 32, 33, 34 and 35, a clay loam. No. 33 is stony in places, and 35 has numerous small alkaline flats. The soil throughout will generally average class 2. Berry Creek flows south through Nos. 34 to 30, and a long narrow lake enters 34 from the north-west.—*J. K. McLean*, 1884.

36. Outlines.—North, open, undulating prairie, interspersed with ponds and grass swamps, with occasional alkaline spots. For the most part the soil is first-class, although here and there spots of second class land occur.—*T. Kains*, 1883.

Rolling prairie; clay loam soil; clay subsoil. Classes 1 and 2.—*J. K. McLean*, 1884.

37. Outlines.—Open and generally rolling plains. A few coulées cross, and some marshy ponds dot the surface. The soil is either of a very light and sandy character, or else a hard and sun-baked clay, and would rank below second class.—*L. R. Ord*, 1883.

Southwards, surface water is in fair supply in ponds and marshes, some of the latter of which are grassy. There are occasional alkaline spots to be found. The soil, as a rule, is first class,

but a proportion of second class land appears in patches.—*T. Kains*, 1883.

38. *Outlines.*—Open, rolling plains. A few scattered bluffs and some small brush close to the northern boundary. The country is very dry. The soil improves towards the north, and ranks as class first, although there are some tracts of sandy, dry and worthless lands.—*L. R. Ord*, 1883.

39. *Outlines.*—Rolling land, generally bluffy. The surface is much broken by deep ravines and Battle River, which crosses from Sections 1 and 12 to Section 36, in a valley about a mile wide and some 300 feet deep, with steep clay banks. The river is sluggish, and its course is very tortuous. The valley is mostly wooded, but with timber of not much value, save for fuel. The greater part of the arable surface lies south-east of Battle River, and is rolling land, with numerous thick bluffs of poplar along the valley, gradually spreading into open prairie at the south line. The soil is a black sandy loam, very rich in places.—*L. R. Ord*, 1883.

40. *Outlines.*—North, the country is rolling, and in the western part is fairly timbered with poplar. Soil, first class.—*C. A. Magrath*, 1883.

Rolling land, with many thick bluffs of poplar. Sloughs, ponds, a few shallow coulées and muskegs, cross the township. Soil, a sandy loam, 12 to 15 inches deep, and in places very rich, class 1. Along the north boundary it is rolling prairie. In the western part the line leaves the true prairie and passes into a bluffy country.—*L. R. Ord*, 1883.

41. *Outlines.*—Rolling country, mostly prairie, with bluffs of poplar, which are thickest in the south and south-east, but thin out towards the north. A range of hills, rising to about 300 feet above the plain, lies in the south and south-west. Soil, of fair quality, and is sandy loam, some 12 to 15 inches deep, with sandy and, at places, clay subsoil. Would rank as first class. Along the south boundary it is rolling.—*L. R. Ord*, 1883.

Southwards, is rolling prairie. There is a good growth of poplar in the south-west, and the soil, generally, is first class.—*C. A. Magrath*, 1883.

42. *Outlines.*—Rolling prairie, with sparsely scattered bluffs of poplar, somewhat broken by ravines in the north-east corner. A large marshy lake crosses the west line in Section 19, and discharges by a small creek through the ravines in Sections 25 to 36. Soil, sandy loam, rich in places, but averaging below first class.—*L. R. Ord*, 1883.

43. *Outlines.*—Rolling prairie, dotted here and there with clumps of small poplar bush. Towards the east line the surface is broken by broad and deep valleys, into which run numerous ravines, making the country rough and hilly. The slopes are, in many places, clothed with poplar woods, some of the timber being of fair size. Soil, commonly light and sandy, and would rank as class second.—*L. R. Ord*, 1883.

- 44. Outlines.**—North, undulating country, broken by ravines containing alkaline lakes. A few poplar bluffs occur. The soil is sand and clay loam, but stony in places.—*T. Kains*, 1883.

Open, rolling prairie, with a few scattered patches of very small poplar. A creek from the west, some 40 links wide and 18 inches deep, flows in a valley, deepening to eastward, from Section 18 across the township to Section 25, and after crossing the boundary flows south to opposite Section 1, where it turns south-east, and may be traced by the eye to Battle River, several miles distant. The valley is, in places, wooded, but usually bare of timber. The township is not well fitted for agriculture, being too dry and arid, with very light sandy soil. Indeed, in places, it is loose sand, and ranks below class 2.—*L. R. Ord*, 1883.

- 45. Outlines.**—A long, narrow alkaline lake extends from the south-east corner diagonally across the township. In the interior are several lakes. The western part is well wooded. Land, high and undulating. Soil, of a fair quality.—*J. J. McArthur*, 1883.

The surface along the southern boundary has heavy undulations, in the troughs or ravines of which, are alkaline lakes and ponds. Poplar, in bluffs, grows here and there. The soil is a sandy and clayey loam.—*T. Kains*, 1883.

- 46. Outlines.**—A valley, about 50 chains in width, and in which is a long alkaline lake, extends east and west through this township. To the south of this valley the country is much broken. To the north it is undulating, with scattered bluffs of poplar and good soil.—*J. J. McArthur*, 1883.

- 47. Outlines.**—Is undulating, with many lakes and ponds. There are many scattered bluffs of poplar. Soil, good, and pasturage excellent.—*J. J. McArthur*, 1883.

- 48. Outlines.**—Very undulating and dotted with lakes and ponds. Bluffs of poplar are numerous. Soil, excellent.—*J. J. McArthur* 1883.

- 49. Outlines.**—Is hilly, and broken by deep ponds and small lakes. Bluffs of poplar and willow cover about one-half the surface. The soil is a good sandy loam; subsoil, clay.—*A. F. Cotton*, 1884.

- 50. Outlines.**—Is hilly and broken, and bluffs of poplar and willow are numerous. A large lake extends from the east boundary across this and Range 12. It is over three miles wide in some places, and covers fully one-third of the township. The soil in the south half is a good sandy loam, while the north half is little better than blown sand.—*A. F. Cotton*, 1884.

- 51. Outlines.**—West and east, rolling prairie, much broken by ponds and lakes. Sections 6 and 7 are almost entirely submerged by an arm of a large lake. Sections 19, 30 and 31 are much broken by lakes and ponds, and also by a marsh in 30. Wood is plentiful in 19, 30 and 31, and in the south of 6. Ponds in Sections 1 and 36, also a trail in 25. Bush on east line in 36 and north half of 25; also scrub in 13 and 24. Hills in south of 13.—*M. Deane*, 1883.

- 52. Outlines.**—West and east, rolling prairie, considerably broken by lakes and ponds. A lake, about half a mile wide, on Section 12,

and a smaller one on 13. Several ponds in 1, 12, 13, 25 and 36; also a small creek, course west, in 25. Sections 13, 24 and 25 are well wooded. Wood is also plentiful westwards. A trail in Section 7.—*M. Deane*, 1883.

53. *Outlines.*—Is generally rolling, with ranges of small hills and wide valleys. Has no running streams, but is well watered by small lakes, and is densely wooded with 2 to 4-inch poplar and high grey willows. There are also bluffs of 4 to 8-inch poplar. The alluvial soil consists of from 4 to 8 inches of sandy loam, and the subsoil is, for the most part, a coarse sand. The township is unsuited for agricultural purposes, and there are no trails passing across it.—*C. A. Magrath*, 1884.

54. *Outlines.*—Is generally hilly. The only body of water of importance is Vermillion Lake, which stretches across the central portion of the township, from Section 12 to Section 30. The width of the lake varies from 10 to 40 chains. A range of hills, 50 feet high and 70 chains distant from the lake, follows it across the township on the south side. The country is densely wooded with poplar, from 4 to 8 inches in diameter, and some scattered spruce and high grey willows. A cart trail, running slightly south of east, passes through Section 13. The township is unsuited for agricultural purposes.—*C. A. Magrath*, 1884.

55. *Outlines.*—The North Saskatchewan River runs along the northern boundary in Section 36, and is here about 16 chains wide. On either side of the river the banks have a more or less gradual rise to the height of about 200 feet above the water level, and on the south side of the river are densely timbered with 5 to 12-inch poplar and spruce, and some birch. Otherwise, the township is chiefly wooded with small burnt 1 to 3-inch poplar, and bluffs of 3 to 7-inch poplar and willow. The country is generally rolling, and not well watered. The soil consists of about 4 inches of black loam over clay and gravel, and here and there large boulders appear upon the surface. There are no trails in the township, and it is not well adapted for agricultural purposes.—*C. A. Magrath*, 1884.

56. *Outlines.*—Country generally rolling, with small hills and deep coulees towards the south. A large and prominent bare hill, 150 feet high is about equally distributed upon Sections 11 and 14. In the central and eastern portions of the township there are a few large lakes, one of which, lying chiefly within Sections 14 and 15, has for its outlet a creek which drains the central portion of Section 12 and the north-eastern portion of Section 1. This creek flows through a deep coulee. Other small creeks drain the township, which is, for the most part, open country, with an occasional bluff of 3 to 6-inch poplar and willow. There is also some scattered 4 to 10-inch poplar. The soil consists of from 5 to 10 inches of black loam over a stiff clay. This is essentially an agricultural township. There are no trails.—*C. A. Magrath*, 1884.

North, thickly timbered with poplar, and with patches of spruce in places. The soil is fair.—*G. B. Abrey*, 1883.

- 57. Outlines.**—Is generally rolling, with the exception of a few sections, which are undulating. Most of this township is prairie, with occasional bluffs of 3 to 7-inch poplar and scrub willow. In the western portion the bluffs are larger and more numerous. Sections 13, 14, 23, 24 and 26 are, for the most part, submerged by Duck Lake, which has a very small outlet at its north-west limit. There are a few small but heavily-timbered islands in this lake. Small portions of Sections 7, 8, 18 and 36 are also submerged by lakes. A branch of the Fort Pitt trail passes from Section 30 to 1. The soil consists of a black loam, varying in depth from 5 to 15 inches, and is underlaid by clay.—*C. A. Magrath, 1884.*
- 58. Outlines.**—Is generally rolling, with the exception of a few hilly sections in the south-east. Bluffs of 4 to 8-inch poplar, and a considerable amount of willow, are distributed throughout the township. A large portion of Section 18 is submerged by the eastern part of Saddle Lake, out of which Tail Creek flows in a direction slightly north of east, draining the central portion of the township. A portion of Section 12 is also submerged by a large lake. The surface soil consists of about 5 inches of black loam over clay. The Fort Pitt cart trail passes through the southern and central portions, from Sections 7 to 12. This township is suitable for agricultural purposes.—*C. A. Magrath, 1884.*
- 59. Outlines.**—Is hilly, and broken by swamps and lakes, and is covered with small poplar and willow scrub. The soil is a good sandy loam.—*A. F. Cotton, 1884.*
- 60. Outlines.**—Is rolling country, broken by several lakes of considerable size, the largest of which is Floating Stone Lake. The timber is principally small poplar, a great deal of which is dead, while the lakes are all fringed with spruce and a little tamarac. A few openings, covered with low scrub, occur. The soil is a good sandy loam. Some Indians have built houses, and are living near Floating Stone Lake.—*A. F. Cotton, 1884.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XII.

5. *Outlines*.—West, rolling prairie, with a sandy loam soil. A deep ravine, traversed by a small creek flowing eastward, is intersected in Section 7; also, a small marsh in 6. No wood.—*F. W. Armstrong*, 1883.
6. *Outlines*.—West, rolling prairie, with a sandy loam soil. In the north, Chin Coulée crosses the township, and further south, in same section, there are low hills. A small creek in 18. No wood.—*F. W. Armstrong*, 1883.
7. *Outlines*.—West, rolling land. Soil, a sandy loam. In the south half of Section 6 Chin Coulée was crossed.—*F. W. Armstrong*, 1883.
8. *Outlines*.—West, rolling land, with a sandy loam soil. Trail to Fort Walsh enters on Section 7.—*F. W. Armstrong*, 1883.
9. *Outlines*.—West, rolling land, with a sandy loam soil. A small creek crosses the line in Section 6.—*F. W. Armstrong*, 1883.

East, rolling prairie, broken, on Sections 12 and 13, by the Forty-Mile Coulée and Yellow Lake. For a couple of miles north of the lake the land falls southward, and is rather stony. Soil, principally sandy loam. Class 2 throughout.—*J. G. Sing*, 1883.

South, fine level prairie, covered with rich grass and flowers, the soil being a friable sandy loam, without stones.—*O. J. Klotz*, 1883.

Sub-division.—Generally a rolling prairie. Soil, alluvial brown loam, 12 inches deep, on a subsoil of sand and clay, and on the ridges stony and gravelly. The land is good for farming purposes. There is no wood, but the proximity of coal will supply this want for fuel purposes.—*C. LeBer*, 1883.

10. *Outlines*.—West, rolling land, with a sandy loam soil. A small lake, having cut banks, in Section 7, and a trail to Medicine Hat in 18. No wood on line.—*F. W. Armstrong*, 1883.

East, rolling prairie. Soil, sandy loam. Class 2. The McLeod trail crosses on Section 25, thence south-west. Neither water nor timber.—*J. G. Sing*, 1883.

Sub-division.—Rolling prairie. Soil, a sandy loam of 12 inches, on a subsoil of clay and sand. Class 2, except the north-west, which is rather sandy. Good farming soil, except for its dryness. No wood; but for the purposes of fuel coal may be obtained from the mines not far distant. Water, generally, is scarce, except in a long fresh-water lake which crosses Sections 7, 8, 9, 10, 2 and 3, and extends into the adjoining townships south and west.—*C. LeBer*, 1883.

11. *Outlines*.—East, the South Saskatchewan River flows through this township from Section 7 to 24 and 13. Both these Sections

are more or less broken by the river banks, the latter being very rough and uneven throughout. There is plenty of good coal in this vicinity. The rest of the country is rolling prairie. The soil is principally sandy loam, and class 2, with some third class occurring at intervals, south of the river.—*J. G. Sing*, 1883.

Sub-division.—Generally undulating prairie, except in the vicinity of the Saskatchewan River, which courses across the township through Sections 7, 8, 9, 16, 15, 23, 24 and 13, giving the similar features to the neighboring country as in Township 12, this range. The river is also about the same size as there stated, but possesses higher banks—in places, 200 feet. The soil south of the river is dry and sandy. Classes 2 and 3. North of the river it is much better, being clay and clay loam, with but little surface water.—*L. Grondin*, 1883.

12. *Outlines.*—North, Sections 36, 35 and 34 are rolling prairie. Soil, clay loam. In Section 33 the line descends into the valley of Bow River, which is from 6 to 8 chains wide here. The valley is not more than 70 feet deep, and in a great number of places the country is sloping gradually towards the river.—*C. A. Magrath*, 1882.

East boundary, rolling prairie, with sandy loam soil. Class 2. The Bow River flows southward through this township, entering the north-west corner of Section 33 and leaving near the south-west corner of 7.—*J. G. Sing*, 1883.

Sub-division.—The Bow River courses across this township, entering at Section 33 and going south as far as 8, where it takes a bend and leaves the township at Section 7. The land in the vicinity of the river is broken and stony; the banks in some places are 120 feet high, and entered by ravines running into the adjoining country. The river is about 5 feet deep and 300 to 450 feet broad. The country back from the river is an undulating prairie, with a clay and clay loam soil. Classes 1 and 2. Beyond the river water is scarce, and there is no wood.—*L. S. E. Grondin*, 1883.

13. *Outlines.*—North and east, unbroken, rolling prairie. Wood and water scarce.—*J. A. Maddock*, 1882.

Section 7 is broken by coulées running into the valley of the Bow River, which is about 60 chains east of the west line, and running in a southerly direction. Section 30 gradually descends into the valley of the Bow River, which is flowing southeasterly. On the north side of the river coal is to be seen cropping out of the bank in seams about 3 inches in depth. The first three south sections are rolling prairie. Soil, clay loam. In the fourth section lies the valley of the Bow River. Generally, the country is sloping gradually towards the river.—*C. A. Magrath*, 1882.

Sub-division.—Northwards and eastwards the township is gently undulating; southwards it is very much broken with ravines running to the Bow River, which courses over Sections 30, 19, 20, 17, 8, 7, 6, 5 and 4, and has an average width of about 700 feet. In the last two sections a large island is formed in the

river, the soil of which is deep and fertile. The soil in the centre and east is deep and rich, and admirable agricultural land. There is no wood, hay or meadow land or marshes.—*J. Warren*, 1883.

- 14. Outlines.**—Section 6 is undulating, and 7, 18, 19, 30 and 31 are rolling prairie. Soil, light and sandy, and in some places a large percentage of gravel.—*C. A. Magrath*, 1882.

North, east and south, rolling prairie. Neither wood nor water. Soil dry and grass stunted.—*J. A. Maddock*, 1882.

Sub-division.—The general surface of the township is undulating, with a few hills in the south-east. Soil, clay loam, of an average depth of 3 inches upon a clay subsoil. Class 2. Water is very scarce and the soil somewhat dry, and crops would be stunted in dry season. No wood.—*J. Warren*, 1883.

- 15. Outlines**—North, generally level, with places slightly undulating. Small sloughs in Sections 31 and 32. To the east, the township is rolling. This line intersects a dry slough, over one mile long, in Sections 12 and 13. There is no wood in the township, and very little surface water.—*J. A. Maddock*, 1882.

Level prairie westwards, with the exception of a stony valley in the south-west. Great scarcity of water.—*O. J. Klotz*, 1882.

Sub-division.—Rolling prairie. Soil, a hard clay, sandy and dry. The grass is poor, short and thin. Surface water is scarce, and there is no wood of any kind, and no settlers.—*F. Lynch-Staunton*, 1883.

- 16. Outlines.**—North and west it is level prairie, with great scarcity of water. Sandy loam soil, and some scrub.—*O. J. Klotz*, 1882.

East, the country is slightly undulating. There are marshes in Sections 1 and 25, that in the latter section is quite extensive, but, being shallow, dries up early. The soil is a sandy loam.—*J. A. Maddock*, 1883.

Sub-division.—Almost all rolling prairie. Soil, a hard, dry, sandy clay, with a poor thin crop of grass only a few inches high, except in the bottoms of the hilly portion, where tolerable grazing may be found. There are some marshes, but all poor water. No wood, and no settlers. The C.P.R. crosses the north-east corner.—*F. Lynch-Staunton*, 1883.

- 17. Outlines.**—Westwards, the prairie is level, becoming undulating toward the north. The soil is sandy loam, with clay subsoil—cactus and sage brush occurring throughout. The south is level, dry prairie, with a sandy loam soil.—*O. J. Klotz*, 1882.

East, undulating prairie, interspersed with numerous sloughs. Soil, a good sandy loam.—*H. C. Denny*, 1882.

Sub-division.—Nearly all level prairie, and very suitable for farming purposes. The soil is partly a clay and partly a sandy loam. Class 2. Numerous sloughs occur in this township, but most of them dry up as the summer advances. Water is good only in the large marshes. The C. P. R. and the Medicine Hat and Calgary trail cross the township through Sections 2, 3, 10, 9, 16, 7, 18 and 19.—*L. Gosselin*, 1883.

- 18. Outlines.**—West, the prairie is level, becoming undulating toward the north. The soil is sandy loam, with clay subsoil—cactus and sage brush occurring throughout. A creek on Section 31, and small scattered marshes throughout.—*O. J. Klotz*, 1882.

East, rolling prairie, with numerous sloughs, most of which are dry in summer. The soil is good sandy loam.—*H. C. Denny*, 1882.

Sub-division.—Rolling and undulating prairie. Soil, sandy loam, with a few sections of clay loam. Classes 2 and 3. Numerous sloughs, having good water, may be found in early summer, but many of them dry up later on. One of these sloughs covers most of Section 36. No running streams, and no wood.—*L. Gosselin*, 1883.

- 19. Outlines.**—The land to the west is all third class.—*T. Drummond*, 1882

East, undulating and dry prairie.—*J. Bignell*, 1882.

Sub-division.—Rolling and undulating prairie. Soil, mostly a sandy loam, and class 3, the south part being very dry and stony. A number of marshes may be found in early and mid-summer, but dry shortly after. On Sections 13 and 14 a pond of 81 acres (September area) occurs, containing fresh water. The Little Sand Hills Creek crosses Sections 32, 33, 34 and 35, and a gully, 40 feet deep, Section 36.—*L. Gosselin*, 1883.

- 20 Outlines.**—The land along the north boundary is too much broken for agricultural purposes. The ravines are very numerous, with precipitous banks, about 400 feet high. Along the west boundary the land is all third class. One-Tree Creek crosses the line in Section 31, and in the vicinity of this creek the soil is very sandy.—*T. Drummond*, 1882.

East, prairie; northern half much broken by ravines. A few also appear in Sections 1 and 2. A marsh, about 20 chains wide, in northern half of Section 36. No wood, and water scarce.—*J. Bignell*, 1882.

Sub-division —Level and undulating by turns. Soil, clay and sandy loams. Class 3. In the east there are large gullies or ravines, from 50 to 150 feet deep, running some eight miles southward. These are a great obstacle to farming in that portion. Late in the summer water becomes very scarce, and is only to be found in the pools of Little Sandy Hills Creek, between Sections 32 and 33.—*L. Gosselin*, 1883.

- 21. Outlines.**—The land in this township, along the west meridian, is second class, and in the south it is broken, hilly and worthless.—*T. Drummond*, 1882.

The Red Deer valley cuts up a large area of this township, making it unfit for settlement. However, portions of the north-east and south-west quarters consist of good open, undulating prairie. Some cottonwood grows in the river valley. Parts of the valley are well adapted for grazing purposes.—*C. F. Miles*, 1882.

The Red Deer River runs through this township, with precipitous banks of sandstone, about 400 feet high cut up by the

weather. Numerous belts and patches, frequently covering an area of over half a square mile, composed of cottonwood, in sizes up to 24 inches diameter, grow along the river; also a few small poplar, with scrub of cherry, sarvis berry, &c., &c. A few deep coulées on the north side of the river.—*A. W. McVittie*, 1882.

Sub-division.—The Red Deer River enters Section 33, runs south and then south-easterly, leaving by Section 12. A large portion of the river here lies in the Dead Lodge Canon, described in Township 21, Range 11, and the features there mentioned are similar to those here, the whole being a perfect chaos of deep, precipitous gulches, and rounded bare clay and projecting sandstone surfaces. The river, in its course, receives two tributaries from the south, known as the One-Tree and Sand Hill Creeks, which, in their turn, run in deep, sinuous and precipitous gullies, from 150 to 200 feet under prairie level and, approaching the river, form into extensive washouts and counter ravines of a similar character to those of the main river. The township is almost useless for farming, except where the soil is not disturbed, in Sections 5, 8, 30, 23, 24, 25, 26, 35 and 36, where portions, fairly level, with a sandy loam soil, supporting an average crop of grass, are to be found.—*J. A. Snow*, 1882.

- 22. Outlines.**—Northwards and eastwards it is rolling prairie, well watered by sloughs, the water of which is only slightly alkaline. For agricultural purposes this part of the township may be ranked as second class. Soil, clay loam to heavy clay. A fine stream of fresh water—Berry Creek—runs near the north and east side.—*A. W. McVittie*, 1882.

The soil in the west is second class. The Red Deer River crosses the line in Section 7, where the banks slope gradually down to the river, and are only about 50 feet high. At this place there is an old crossing of the river. North of the river the line crosses, in Section 18, a well-beaten cart trail to the forks of the Red Deer and South Saskatchewan Rivers. In Section 30 the line crosses a creek with running water. North of the river the land is third class.—*T. Drummond*, 1882.

Sub-division.—This township is beautifully undulating. Soil, a good sandy loam on a clay subsoil. Classes 2 and 3. The Red Deer River passes through the south-eastern sections 7, 8, 9 and 4. In this township the river banks are not over 100 feet high, and slope to the river valley. On Section 8 are the remains of an old fort or trading post of the Hudson Bay Company, and immediately above it an excellent river ford. A fine tributary, Berry Creek, joins the river in Section 4. This creek is about 70 feet wide, 1 to 3 feet deep, and has a fine gravelly bottom, clear, fresh water, and is well stocked with fish. This stream crosses the township from the north, and is forked, in Section 26, by a tributary. Both of these streams meander through the township in a valley from one-half to one mile wide, with easy sloping banks. On the whole, this township is an inviting one for settlement.—*J. A. Snow*, 1883.

- 23. Outlines.**—West, surface gently-rolling. Soil, light sandy loam, 10 to 12 inches deep; subsoil, loamy clay, hardened. Many ponds of brackish water.—*W. Ogilvie*, 1882.

East and south, rolling prairie, watered by numerous sloughs, slightly alkaline. Berry Creek flows through this township, passing close to the north-east corner. Soil ranges from a clay loam to a heavy clay, and rates class 2.—*A. W. McVittie*, 1882.

Sub-division.—At the time of survey (July) Berry Creek and its tributaries contained an abundance of water. These skirt the township on the east, south and west, but surface water is scarce in the central and northern parts. The soil is a fair sandy loam, varying from 2 to 20 inches deep, on a clay subsoil, and, no doubt, in a moist climate, would produce fine crops. No wood.—*J. A. Snow*, 1883.

- 24. Outlines.**—North and west, surface generally rolling. Soil, sandy loam, 10 to 15 inches deep; subsoil, hard clay and sand. No water. In the west there are some small meadows.—*W. Ogilvie*, 1882.

Rolling prairie, pretty well watered by numerous sloughs, the water of which is only slightly alkaline. For agricultural purposes the township may be classified as second class. The soil is clay loam to heavy clay.—*A. W. McVittie*, 1882.

Sub-division.—Mostly undulating or level. Soil, sandy loam, from 1 to 20 inches deep, on a clay subsoil. Class 3. One small stream or branch of Berry Creek winds through Sections 6, 8, 17, 20, 29, 32 and 33. This stream was dry, except in pools, where the water is good. No wood.—*J. A. Snow*, 1883.

- 25. Outlines.**—West and east, undulating, open prairie. In Section 6 Berry Creek was crossed twice, and again in 30. Sandy and clay loam soil. A fair supply of water in the south, but scarce towards the north.—*C. F. Miles*, 1883.

South, rolling. Soil, sandy loam; subsoil, hard clay and sand. Water scarce.—*W. Ogilvie*, 1882.

Sub-division.—Rolling prairie, with a few deep sloughs of fresh water. Berry Creek—fresh water—passes through the north-west corner. The soil is principally a yellow loam on a clay subsoil. Class 2. Vegetation is thick and long, and the supply of water inexhaustable. It is a good grazing township.—*G. E. MacMartin*, 1883.

- 26. Outlines.**—All undulating prairie. Very little water in the west and in the east. Only a small creek and a small marsh on Section 13. No wood.—*C. F. Miles*, 1883.

Sub-division.—Mostly rolling prairie. The western portion is considerably broken by Berry Creek, which contains good water, and plenty of it. The sloughs contain fresh water. The soil is composed of yellow and clay loam, of a depth of from 4 to 8 inches, on a very hard clay subsoil, and rates class 2, with some class 3. No wood, except some small willow on the creek. It is a capital township for grazing—water and feed being abundant.—*G. E. MacMartin*, 1883.

- 27. Outlines.**—High, undulating prairie. Berry Creek runs southerly through the township. On or about Section 22, in the valley of the creek, is situated Stone Pile Hill, having a commanding view,

and around the east side of which skirts the reek. The soil is clay loam, second class.—*C. F. Miles*, 1883.

- 28. Outlines.**—In the north, rolling and undulating. Fewer marshes than the more easterly townships. Soil, clay loam, generally class 1. Good farming land. Some cactus. No wood. All water fresh. *T. Fawcett*, 1883.

Undulating and rolling prairie. Clay loam, with clay subsoil. Berry Creek meanders south-westerly through the south-east corner.—*C. F. Miles*, 1883.

- 29. Outlines.**—Rolling and undulating prairie. Clay loam soil; clay subsoil. Class 2, except a portion at the south-east corner, which is class 3. A creek, in a valley about 20 chains wide and 50 feet deep, passes through the north-east corner.—*J. K. McLean*, 1884.

South, rolling prairie. The soil is good, while the ponds and marshes afford fresh water.—*T. Fawcett*, 1883.

- 30. Outlines.**—Undulating prairie. Clay loam soil; clay subsoil. Class 2. Two creeks pass through this township. One coming from the north-west leaves the township near the south-east corner, and the other crossing the meridian in Section 19 runs south-east. Both run in valleys from 30 to 60 feet in depth, and have a slight fringe of willow along their banks. The water has but slight indications of alkali.—*J. K. McLean*, 1884.

- 31. Outlines.**—Undulating to level prairie. Clay loam soil; clay subsoil. A small creek passes through this township, entering in Section 31. Excepting a large flat in the north-east, which is class 3, this township is class 2.—*J. K. McLean*, 1884.

- 32. Outlines.**—North, gently-rolling prairie, with a second or third class soil. A branch of Berry Creek, flowing south-east, in Section 34, and a marsh about three-quarters of a mile wide in 35 and 36, are intersected by this line. No wood.—*E. Bray*, 1883.

Rolling prairie. Clay loam soil; clay subsoil. Class 2.—*J. K. McLean*, 1884.

- 33. Outlines.**—Undulating to rolling prairie, very stony in places. Classes 2 and 3.—*J. K. McLean*, 1884.

- 34. Outlines.**—Undulating to rolling prairie. Stony clay loam soil; clay subsoil. Classes 2 and 3. A muddy lake extends about two and a-half miles into the north-east portion.—*J. K. McLean*, 1884.

- 35. Outlines.**—Rolling prairie. Clay loam soil, clay subsoil. Class 2.—*J. K. McLean*, 1884.

- 36. Outlines.**—North, open, undulating prairie, interspersed with ponds and grass swamps, with occasional alkaline spots. Soil is first class, generally, although here and there are spots of second class land.—*T. Kains*, 1883.

Rolling prairie. Sand loam and clay loam soil; clay subsoil. Classes 1 and 2.—*J. K. McLean*, 1884.

- 37. Outlines.**—Westwards, undulating prairie, with a sandy loam soil. Dry watercourses in Sections 6, 18, 30 and 31, those in 30 passing through deep ravines. In 31 a creek, in a bottom about 40 chains wide, was only standing pools of water, there

being no current. Soil, first-class. No wood.—*F. C. Miles*, 1884.

Eastwards, rolling prairie. Ravines, traversed by creeks, which dry up early, were crossed in Sections 12 and 25; also a small marsh in 24. Wood and water scarce.—*L. R. Ord*, 1883.

As seen from the southern boundary, the surface appeared to be undulating, and without wood. There are a number of ponds and grass swamps, and some indications of alkali. The soil is first-class, with some patches of second-class.—*T. Kains*, 1883.

- 38. Outlines.**—West, undulating prairie. Some large spruce in ravine and on south bank of creek in 31. Soil in southern section is first-class; towards the north second and third-class, being of a sandy loam. Ravines in 6 and 31; also, an old cart trail in north of 18. A branch of Battle River was crossed three times in 31, banks being 150 feet high at some points.—*C. F. Miles*, 1884.

East, open, rolling prairie, crossed by a small tributary of Battle River. Depot trail in Section 36 and a small lake in 24. The centre of Section 1 is broken by a dry creek bed. Small hills appear here, and bush on hills south of creek in 36.—*L. R. Ord*, 1883.

- 39. Outlines.**—West, undulating prairie in south; north is much broken by Battle River, having banks 250 feet high. Soil, a sandy loam in south, class 1, but in the north is rated class 3. Battle River crosses line three times in Section 30. Marshes in 6 and 7. Poplar and willow.—*C. F. Miles*, 1884.

East, rolling, scrubby prairie. Sections 1, 12, 13 and 24 are hilly, with several ravines. Battle River is intersected by this line in Sections 1 and 12.—*L. R. Ord*, 1883.

- 40. Outlines.**—North, the land is rolling and partially wooded, with scattered bluffs of small poplar. There are some large lakes.—*C. A. Magrath*, 1883.

West, slightly-undulating prairie, with a sandy loam soil Class 1. Sections 30 and 31 are an alkaline flat. There are several small marshes in 7, 18 and 19. Small poplar and clumps of willow.—*C. F. Miles*, 1884.

Rolling prairie, with poplar bluffs in north and small scrub in south. Small sloughs in Sections 13 and 25. Soil of fair quality, and a sandy loam.—*L. R. Ord*, 1883.

- 41. Outlines.**—East and west, gently-rolling prairie, nearly all open, with a few bluffs in patches over the surface. The soil is of good quality, generally a sandy loam, some 15 inches deep, with sandy loam subsoil in the eastern parts, changing to clay loam towards the west. Class 1.—*L. R. Ord*, 1883.

South, rolling, with scattered bluffs of small poplar. There are some lakes.—*C. A. Magrath*, 1883.

- 42. Outlines.**—Rolling land, for the most part prairie, with a few scattered bluffs of poplar, these increasing in number in the northern sections. Soil, a good sandy loam, 15 inches deep, with a sandy loam subsoil in the eastern parts, changing to clay loam towards the west. Class 1.—*L. R. Ord*, 1883.

- 43. Outlines.**—Rolling land, the southern half bluff; woods and prairie about equally divided. The timber is poplar, larger than that in many of the ranges to the west, but only good for fuel. The northern half is open prairie. The township is very dry, with but few sloughs and ponds, and the soil light and sandy. Ranks below class 1.—*L. R. Ord*, 1883.
- 44. Outlines.**—North, undulating and rolling prairie. The soil is generally first class.—*T. Kains*, 1883.
Rolling prairie. Along the base line the country is wooded with bluffs of poplar, but the greater part of the township is open plain. A creek flows across to the eastward, and a few ponds—some of brackish water—dot the surface. Though there is some good land along the base line, and also scattered in patches, the soil would not average above class 2, as the greater part of it is a light sandy loam, in many places a sandy soil, and too dry to be of value.—*L. R. Ord*, 1883.
- 45. Outlines.**—Is high, undulating, and much broken by lakes and ponds. The soil is a sandy loam, about 6 inches in depth, with clay subsoil.—*J. J. McArthur*, 1883.
South, undulating and rolling. Soil, first class.—*T. Kains*, 1883.
- 46. Outlines.**—A good portion of this township lies in the Rolling Hills. The country is very broken, and dotted with lakes and ponds. The north sides of the hills are more or less densely wooded. The soil is good and the grasses luxuriant.—*J. J. McArthur*, 1883.
- 47. Outlines.**—Very undulating, and broken by ponds and lakes. Poplar bluffs are numerous. The soil is good and the pasturage excellent.—*J. J. McArthur*, 1883.
- 48. Outlines.**—Very undulating, and broken by ponds and lakes. Poplar bluffs are numerous. The soil is good and the pasturage excellent.—*J. J. McArthur*, 1883.
- 49. Outlines.**—Is an undulating country, with a fine sprinkling of small bluffs of poplar. About the middle of this township there is a small creek running nearly north, which, after passing through some large ponds, empties itself into a large lake in Township 50. The soil is a good sandy loam; subsoil clay.—*A. F. Cotton*, 1884.
- 50. Outlines.**—The southerly tier of sections is rolling and sloping to the north. A large lake is met with at the extreme north of Section 1. This lake covers more than one-half of this township. The water is some 10 or 15 feet above the level of former years, as the tops of dead poplar appear far out in the water. It is, no doubt, caused by beaver having dammed up the outlets. Many ponds in the vicinity exhibit the same peculiarity. The north of this lake is well timbered.—*A. F. Cotton*, 1884.
- 51. Outlines.**—All rolling prairie, with timber all along the western line, and numerous ponds and small lakes along both eastern and western lines. Ponds in Section 6, 7 and 30, A small creek in

northern part of 31. Sections 1 and 12 are almost entirely submerged by an arm of a large lake; 24, 25 and 36 are much broken by lakes and ponds, and also by a marsh in 25. Wood is plentiful in 24, 25 and 36, and in the south of 1.—*M. Deane*, 1883.

52. *Outlines.*—All rolling land, with timber and scrub, but more dense in the east. Several ponds were crossed, and in Sections 30 and 31 a couple of small lakes. In Sections 18 and 31 creeks cross the west line. In the east ponds are numerous, and small lakes in Sections 13, 24, and on line between 25 and 26; marshes in 13 and 36; also trails in 12 and 36.—*M. Deane*, 1883.

56. *Outlines.*—Sections 36, 35 and 34 are thickly timbered with poplar, and with patches of spruce in places. The soil is fair. Sections 33, 32 and 31 are very rough, and nearly all covered with poplars and broken by high hills.—*G. B. Abrey*, 1883.

57. *Outlines.*—Is rolling prairie, with bluffs of 3 to 8-inch poplar and high grey willow. The Snake Hills—which occupy a considerable portion of Sections 17 and 20—lie in a direction about north-east and south-west. Across the valley from these—about one mile and a half distant—there is another range of hills running in a similar direction and covering a small portion of the township south of the Victoria cart trail. The Saskatchewan River runs in a south-east direction through Sections 18, 8 and 4, and is joined in its course by Saddle Lake Creek, which drains the central portion of the township. A Government farm is situate on this creek, in Sections 34 and 35; an Indian storehouse is situate upon the river, in Section 18, and there are a number of Indian houses in Section 30. The larger portion is suitable for agricultural purposes, the soil consisting of about 6 inches of black loam over clay. The Victoria and Saddle Lake trail passes through the north-western portion. The country is well watered by small lakes and creeks, in the neighborhood of which scattered spruce timber may be found.—*C. A. Magrath*, 1884.

58. *Outlines.*—Is generally rolling, with the exceptions of a few sections, which are of a more hilly nature. Is an open country, with bluffs of 4 to 8-inch poplar, and high grey willow, and is well watered by large lakes and running streams. The chief body of water is Saddle Lake, which covers a large portion of Sections 11, 12, 13 and 14, and a small portion of Section 15. This lake is fed at its north-westerly limit by a creek passing through the central portion of the township, from Section 19, and is drained by Tail Creek, at its eastern extremity, and another creek running through Sections 11 and 12 towards the Saskatchewan. Portions of Sections 30 and 31 are also submerged by lakes. A cart trail to Fort Pitt runs east across the township from Section 7. Another from Victoria to Whitefish Lake crosses from Section 3 to 30, with a branch passing through Sections 2 and 11, and joining the Fort Pitt trail in Section 12. This is a first class agricultural township, the soil consisting of from 2 to 10 inches of black loam over clay. There is a small settlement, with several improved farms, along Saddle Lake Creek, in and about Section 11.—*C. A. Magrath*, 1884.

- 59.** *Outlines.*—Is a rolling country, covered with small poplar, with a few small openings. A great many lakes and ponds occur in this township. The soil is a fair sandy loam.—*A. F. Cotton, 1884.*
- 60.** *Outlines.*—Is high-rolling country. In Range 12, Sections 31 and 32, lies the south end of Reed Lake, which is about two and-a-half miles long by two miles broad. West of the lake the timber is thick, though none of it measures more than 6 or 8 inches in diameter. East of the lake the country is hilly, but more open. The timber is small; the soil is a good sandy loam. A few Indians have built in the north-east corner —*A. F. Cotton, 1884.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XIII

5. *Outlines*.—West and east, rolling land; sandy loam soil. A marshy valley in Sections 7 and 18; also a small ravine in 19. A deep ravine and small creek in Section 12; also a small marsh in 1. No wood anywhere.—*F. W. Armstrong*, 1883.

South, dry, undulating prairie, somewhat stony; grass short; ravines in Sections 2 and 3.—*O. J. Klotz*, 1883.

6. *Outlines*.—West and east, rolling. Soil is sandy loam. No surface water in the west. On the east, in Section 13, the line crosses a small creek, and in 36 runs into Chin Coulée.—*F. W. Armstrong*, 1883.

7. *Outlines*.—West and east, rolling prairie. Soil is sandy loam. Chin Coulée crosses the south from Section 7 to 1. In Section 6 is a small creek.—*F. W. Armstrong*, 1883.

8. *Outlines*.—West and east, rolling prairie. Soil is a sandy loam. The Fort Walsh trail was crossed in Sections 12 and 7. No wood, and water scarce.—*F. W. Armstrong*, 1883.

North, level prairie, with a fair sandy loam soil. A small clear-water pond was crossed in Section 35.—*O. J. Klotz*, 1883.

9. *Outlines*.—The west side consists of a very dry, rolling prairie, and a soil of very light sandy loam, which bakes very hard. On the west line, in Section 19, is a long narrow lake, in a deep gully, which was taken to be the head waters of Forty Mile-Coulée. Soil in many places stony. In the south-east corner there is a creek.—*F. W. Armstrong*, 1883.

South, level prairie, with a fair soil of sandy loam.—*O. J. Klotz*, 1883.

Sub-division—Rolling prairie, generally. Soil, a dark brown loam, of about 12 inches deep, on a sand and clay subsoil. Stony and gravelly on the ridges and hill tops. This township is fairly adapted for farming purposes. Water is scarce. An alkaline lake occurs on Sections 19 and 20. There is no wood, but a coal seam is exposed on the north boundary of Section 23.—*C. Le Ber*, 1883.

10. *Outlines*.—West and east, is a very dry, rolling country. Soil, very sandy.—*F. W. Armstrong*, 1883.

Sub-division.—Rolling prairie. Soil—in the south—a sandy loam, of 12 inches, on a clay and sand subsoil; in the north, a rather poor sandy loam. The southern part is only good for farming. Water is scarce, except in the south-east, where the lake referred to in No. 10 of Range 12 crosses Section 12. There is no wood, but this lack is compensated for by coal deposits not far distant.—*C. Le Ber*, 1883.

- 11. Outlines.**—This township is very broken by Belly and Bow Rivers, which have their confluence in it, and form the South Saskatchewan River. There is a little timber at the mouth of Big Bow River. The land is all very light and rolling, with surface stone. On the north side of the South Saskatchewan, in some of the large, deep coulées, there are strong indications of coal. The river here flows in a valley which is 300 feet deep and about half a mile broad.—*F. W. Armstrong*, 1883.

Sub-division.—The Bow River enters this township by Section 35, courses southwards and then eastwards, leaving by 12. It is a fresh stream, of various depths—from 4 to 8 feet—and has a good current. Its banks are of different heights, ranging from 100 to 200 feet. It is joined, in Section 27, by the Belly River, which enters the township between 18 and 19, and pursues a very meandering course up to the junction. The township is gently-undulating, except along the rivers, where it is greatly broken. The soil is generally a clay loam of good quality, and—especially south of the river—is very suitable for agriculture. Along the northern tier of sections it is very sandy and arid. Surface water is scarce beyond the river, and there is no wood, except in patches near the rivers and along their banks. This wood is only fit for fuel.—*L. Grondin*, 1883.

- 12. Outlines.**—North, the first four sections are rolling prairie. Soil, clay loam. The remaining two sections are light and gravelly.—*C. A. Magrath*, 1882.

Is very rolling, with sandhills scattered over it. Some few sloughs. A corner of it is cut off by Bow River. No timber.—*F. W. Armstrong*, 1883.

Sub-division.—The Bow River crosses the south-east corner sections. It has here low banks, with good land in the vicinity. The surface of the country is generally undulating, with a clay loam soil, rather dry, but good and suitable for agriculture. There is very little surface water, and no wood of any kind.—*L. Grondin*, 1883.

- 13. Outlines.**—North, hilly and flat land; broken and stony. The soil is grey clay. The Bow River flows along the northern part of this township, crossing the line in Section 35, twice in Section 34 and twice in 33. In Sections 35 and 36 coal seams were found in the steep clay banks. In the west the surface is rolling prairie. The soil is a grey clay. The grass throughout is short. No water, except at Bow River.—*F. W. Armstrong*, 1883.

East, Section 12 is broken by coulées running east into the valley of the Bow River. In Section 25 the line descends into the valley. On the north side of the river coal may be seen cropping out of the bank in seams about 3 inches in depth.—*C. A. Magrath*, 1882.

Sections 1, 2, 3 and 4 are rolling prairie, and have a clay loam soil. Sections 5 and 6 have a light and gravelly soil.—*C. A. Magrath*, 1882.

Sub-division.—The Bow River enters on Section 31, crosses the north boundary and finally leaves on 25. Depth in fall season

about 4 feet, and current about $3\frac{1}{2}$ miles an hour. Seams of anthracite coal, from 6 to 15 inches, are bared on its banks. The general character of the township is a level prairie, of a sandy clay soil, inclined to dryness. The banks of the river rise by two terraces or plateaus, the surface of which is rich, and good for agriculture.—*J. I. Dufresne*, 1883.

- 14. Outlines.**—All the boundaries, except the south which is very much broken by the river, are rolling prairie. The soil is a grey clay. The grass throughout is short. No water.—*F. W. Armstrong*, 1883.

Going north, on the east line, Section 1 is undulating prairie; then the remaining sections are rolling prairie. Soil, light and sandy, and in some places gravelly —*C. A. Magrath*, 1882

Sub-division.—The Bow River enters the township along the southern boundary and re-crosses to Township 13, on Section 31. Seams of anthracite coal are exposed along its banks. The banks rise by plateaus or terraces about 100 feet above the river, and to the rear of these the country is nearly level, except a large valley in the south-east. The soil is a clayey sand, generally class 2.—*J. I. Dufresne*, 1883.

- 15. Outlines.**—Is a slightly rolling prairie. The soil, where good, is a grey clay. A large portion of the township is sandy. There are a few good sized sloughs, but dry.—*F. W. Armstrong*, 1883.

Level prairie in the east, with the exception of a stony valley in the south-east. Great scarcity of water.—*O. J. Klotz*, 1882.

Sub-division.—Generally an even surface, sloping gently southwards. Towards the north there are hills of sand, and the ground is rough, and covered with thick, coarse weeds and sage bush. Large herds of antelopes inhabit these arid tracts. On the remainder of the township the land is a hard, dry, sandy clay, the grass poor, and there is no wood and no surface water, except some small alkaline sloughs.—*F. Lynch-Staunton*, 1883.

- 16. Outlines.**—Level prairie; great scarcity of water, and light soil along the northern and eastern boundaries.—*O. J. Klotz*, 1882.

Is a slightly-rolling prairie. The soil, where good, is a grey clay. A large portion of the township is sandy. There are a few good sized sloughs, but dry.—*F. W. Armstrong*, 1883.

Sub-division.—Rolling or undulating prairie, with numerous places—formerly slough-beds—where the soil seems impregnated with alkaline matter. The grass is generally poor, and does not even form a sod. There is no wood, and no water, except in some stagnant pools. The land is poor for agricultural purposes, on account of the dryness of the seasons here, but may be suited for potatoes better than cereals.—*F. Lynch-Staunton*, 1883.

- 17. Outlines.**—Open, undulating prairie. Soil, class 2; fair but dry, sandy loam. No water.—*L. R. Ord*, 1882.

East, level, becoming undulating toward the north. The soil is sandy loam, with clay subsoil—cactus and sage brush occurring throughout. South, dry prairie; short grass; soil, light.—*O. J. Klotz*, 1882.

Sub-division.—The C. P. R. station—Tilley—is situate on the east boundary line. The surface is mostly level or undulating.

Soil, a sandy loam, on a clay subsoil. There are a few sloughs, which, however, nearly all dry up as the season advances. On parts of Sections 23, 24, 25, 26 and 36 the land is low, and some of it wet, even in the middle of summer. The soil is a good second class, and well suited for agricultural purposes.—*T. Cheesman*, 1883.

- 18. Outlines.**—North, undulating prairie. Soil is a sandy loam, with some clay loam, all class 2. Small clear-water pond in Section 35. On the west the soil is clay. Water is scarce on both lines.—*L. R. Ord*, 1882.

East, level prairie, becoming undulating toward the north. The soil is sandy loam, with cactus and sage brush.—*O. J. Klotz*, 1882.

Sub-division.—This township is high-rolling and undulating prairie, excepting Sections 2, 11, 14, 23 and 26, which are nearly level. There are some sloughs or marshes of considerable dimensions on Sections 13, 14, 23 and 26, and there are other smaller ones scattered throughout, which dry up in summer. The soil is a sandy and clay loam, on a stiff clay subsoil, and may be considered class 2.—*T. Cheesman*, 1883.

- 19. Outlines.**—Open, undulating prairie. Soil, class 2; sandy loam; fair, but very dry. Water scarce. A couple of dry creek beds in Section 7 and a small clear-water pond in Section 1.—*L. R. Ord*, 1882.

Along the east boundary the land is all third class. Dry, rolling and level prairie.—*T. Drummond*, 1882.

Sub-division.—The surface is slightly rolling and undulating. Soil, clay loam, on a stiff, yellow clay subsoil. Class 2. The water in the township is usually dry in the late summer, and is even scarce in midsummer.—*T. Cheesman*, 1883.

- 20. Outlines.**—The soil northwards is fairly good, and is rated principally as second class. The west half of Section 32 and the east of 31 are low and wet. Eastwards, the land is all third-class. One-Tree Creek crosses the line in Section 36, and along this creek the soil is rather sandy.—*T. Drummond*, 1882.

Undulating prairie. Soil, class 2; a sandy loam, fair, but shallow and dry. Little water.—*L. R. Ord*, 1882.

Sub-division.—Either level or gently-rolling prairie. Soil, generally a sandy loam on a hard sand subsoil. Class 2. The few watercourses in the township were dried up, with the exception of occasional pools, at the time of survey (June). In Sections 31 and 32 there is a large wet marsh, and another in 30 and 29.—*T. Cheesman*, 1883.

- 21. Outlines.**—West, undulating and broken prairie. A creek in Section 7, and a spring creek, with two branches, in 19.—*P. R. A. Belanger*, 1883.

The land in this township, along the east meridian and the southern sections, is fairly good, and is rated principally as second class. Sections 5 and 6 contain an area of low, wet ground.—*T. Drummond*, 1882.

Sub-division.—Generally speaking, this is a poor township, the soil being light, and strongly impregnated with alkaline matter; while alkaline ponds, marshes and flats are very numerous. No fresh water and no wood in the township.—*F. Purvis, 1883.*

- 22. Outlines.**—West, rolling and broken prairie. The Red Deer River enters in Section 6 and crosses the south of the township.—*P. R. A. Belanger, 1883.*

On the east side the soil is second class. The Red Deer River crosses the line in Section 12, where the banks slope gradually and are only about 50 feet high. In Section 13 a well beaten cart trail crosses to the forks of the Red Deer and South Saskatchewan. In Section 25 is a creek with running water. North of the river the land is third class.—*T. Drummond, 1882.*

Sub-division.—This is an average township. Berry Creek flows through the north-west corner, in a valley nearly one mile wide, which is excellent farming land. The Red Deer River flows across the southern portion of the township, entering by Section 6 and leaving by Section 12. Its banks are fringed with scattered bush and brush on the north, and scattered poplar and white wood, with thick brush and scraggy timber, on the south. The islands in the river are covered with willow. The soil in the valleys of both the Red Deer River and Berry Creek is a rich clay loam on a sandy subsoil. Hunting Hill is a plateau 200 feet above the river, and lies in the south-west corner.—*F. Purvis, 1883.*

- 23. Outlines.**—West, undulating prairie. Water is scarce.—*P. R. A. Belanger, 1883.*

Eastwards, the surface is gently-rolling. Soil, light sandy loam, 10 to 12 inches deep; subsoil of loamy clay, hardened. Many ponds of brackish water.—*W. Ogilvie, 1882.*

Sub-division.—This township is specially adapted for grazing, the absence of large hay marshes being the only drawback. The central part is watered by Berry Creek, which flows in a southerly direction. Its valley is nearly a mile wide, and contains excellent land, while the water is all that could be desired. The soil, though light and sandy in places, would, under cultivation, produce good crops, particularly hay. The surface is all open, rolling prairie.—*F. Purvis, 1883.*

- 24. Outlines.**—North, surface gently-rolling. Soil, light sandy loam, 10 to 12 inches deep; subsoil, loamy clay, hardened. On the eastern side there is a fine large fresh-water creek, 30 to 40 feet wide, with large flow of water in it. The surface is rolling, and the soil sandy loam. Some small meadows.—*W. Ogilvie, 1882.*

West, undulating prairie. Creeks cross the line in Sections 6, 7 and 30, all flowing in a south-eastern direction, all being tributary to Dead Fish Creek, which courses through the westerly tier of sections.—*P. R. A. Belanger, 1883.*

Sub-divisions.—Well adapted for settlement, the soil being a rich sandy loam, and well watered by Berry and Dead Fish Creeks. Small fresh-water ponds and marshes are numerous.

The water of Berry Creek, which courses over the south-easterly sections, is good and pure, while that of Dead Fish Creek is slightly alkaline. The surface of the township is undulating, and there is no wood of any kind growing.—*F Purvis*, 1883.

- 25.** *Outlines*—All undulating prairie. Only a few small marshes on the west line, and water scarce. In the east, in Section 1, Berry Creek was crossed twice, and again in Section 25. This creek flows along the easterly tier of sections, and contains good water.—*C. F. Miles*, 1883.

The southern tier of sections is gently-rolling, and has a light sandy loam soil on a loamy clay subsoil. Down the eastern tier of sections there flows a fine creek of fresh-water, about 35 feet wide. There are some small meadows scattered along the southern boundary.—*W. Ogilvie*, 1882.

Sub-division.—Mostly rolling prairie. Soil, mostly a yellow loam, class 2, and of a depth of from 4 to 10 inches, on a hard clay subsoil. Two creeks—Dead Fish on the west, and Berry on the east—cross the township. Both contain good water, of which there is always an abundant supply in the latter. No wood. Vegetation is good and water is plentiful, and the township is altogether a superior one for grazing. The trail to Red Deer Forks crosses Sections 33 to 36.—*G. E. MacMartin*, 1883.

- 26.** *Outlines*.—West and east, undulating prairie. Very little surface water. Soil, a fair loam, class 2, over a subsoil of clay.—*C. F. Miles*, 1883.

Sub-division.—Rolling prairie. Soil, principally a yellow loam, averaging 6 inches deep, on a hard and dry clay subsoil, and where clay exists alone it is lumpy. No timber, and no surface water, except in early summer. Although there is a scarcity of surface moisture, yet late in summer there was still grass in abundance, and the township might be rated class 2 for farming or grazing.—*G. E. MacMartin*, 1883.

- 27.** *Outlines*.—Undulating prairie, with a soil of clay loam, and clay subsoil. Rates second class. A small creek in Section 6, and a few marshes along the east.—*C. F. Miles*, 1883.

- 28.** *Outlines*.—North, rolling and undulating prairie. Soil, clay loam, 18 inches deep, on subsoil of clay. Class 1, and where there are scattered boulders, class 2. Several creeks in Section 31.—*T. Fawcett*, 1883.

The west and east of this township consists of slightly undulating and level prairie. A creek in Section 7; Muddy Lake and a marsh in 18; the trail from Blackfoot Crossing to Battleford in 19; a creek in 30 and 31, and a small creek in 1. The north-west is low and flat, with muddy ponds, emptying into Bull Pound Creek. Cacti are numerous. The south half rates second class, and the north-west, half second and half third class.—*C. F. Miles*, 1883.

- 29.** *Outlines*.—West and east, undulating and level prairie. A couple of creeks, nearly dry, in Section 19. Several clear-water ponds—one a large one—in 24. Clay loam soil; clay subsoil. Class 2. *J. K. McLean*, 1884.

South; the soil is good, with the surface gently-undulating, while the ponds and marshes afford fresh water.—*T. Fawcett* 1883.

30. Outlines.—Rolling prairie. Classes 2 and 3. A coulée, with cut clay banks, about 50 feet high, runs through the south-west portion. This coulée, in which there is a small creek, is about one and a-half miles wide, the bottom being very stony and devoid of alluvial soil. Occasional outcroppings of sandstone were seen.—*J. K. McLean*, 1884.

31. Outlines.—Rolling and undulating prairie; clay loam soil; clay subsoil. Class 2. In Section 36 the east line crosses a small creek, but generally water is scarce.—*J. K. McLean*, 1884.

32. Outlines.—North, gently-rolling prairie, with a fair soil. Creeks, flowing south, cross the line in Sections 31, 34 and 36.—*E. Bray*, 1883.

Slightly rolling prairie; clay loam soil; clay subsoil. Class, 2. Several large clear-water ponds were crossed by the west line, and the east line crosses creeks in Sections 25 and 36.—*J. K. McLean*, 1884.

33. Outlines.—Rolling prairie. The western portion class 2; the eastern, being very stony, class 3. Creeks and ponds in Sections 6, 19, 13 and 36.—*J. K. McLean*, 1884.

South, rolling; fair soil; creeks in Sections 1, 3 and 6.—*E. Bray*, 1883.

34. Outlines.—Rolling prairie; clay loam soil; clay subsoil. The eastern portion is very stony, class 3; the western, class 2. In Section 19 there is a cut clay bank flat, without alluvial soil. There are occasional small marshes, and a large clear-water pond in Sections 6 and 7.—*J. K. McLean*, 1884.

35. Outlines.—Rolling prairies; loam and clay loam soil; clay subsoil. Class 2. A few small clear water ponds were crossed on both west and east lines, and in Section 13 an old cart trail.—*J. K. McLean*, 1884.

36. Outlines.—North, open, undulating prairie, interspersed with ponds and grass swamps, with occasional alkaline spots. Generally, the soil is first class, although here and there are spots of second class land.—*T. Kains*, 1883.

Slightly rolling prairie. Numerous fresh-water ponds, fringed with small willows. Clay loam soil; clay subsoil. Class 2. Trail from the Red Deer Forks to Edmonton was crossed in Section 7.—*J. K. McLean*, 1884.

37. Outlines.—Is open, undulating prairie, somewhat broken by ravines, running northerly. A creek, with standing pools of water, and without any current, crosses and re-crosses the east boundary. Another creek rises about the south-west quarter, and running north-westerly, leaves this township in Section 18. Soil, mostly sandy loam, with clay subsoil. First class.—*C. F. Miles*, 1884.

The southern tier of sections are undulating prairie, with many ponds and grass swamps, and occasionally patches of alkali.

The soil is first class, with some places that are second class.—*T. Kains*, 1883.

38. Outlines.—Undulating prairie, broken by creeks and ravines. Bluffs of poplar on the south-east quarter. A creek, with broken banks, runs along the northerly and westerly tier of sections, easterly, into the Battle River, with banks about 150 feet high on Section 36. An old trail runs south-easterly through the north-east corner. Soil, sandy loam, with clay subsoil. First class.—*C. F. Miles*, 1884.

39. Outlines.—Undulating prairie, much broken by ravines and creeks, running into Battle River. Battle River runs south-easterly through the north-east corner, about 250 feet below prairie level—the immediate banks being about 20 feet above the level of the river—which is about 100 feet wide. Soil, sandy loam, with generally sandy subsoil. Second and third class.—*C. F. Miles*, 1884.

40. Outlines.—In the north-eastern part the land is rolling, and partially wooded with scattered bluffs of small poplar. In the north-western part it becomes undulating, with scattered bluffs of poplar. Soil, first class.—*C. A. Magrath*, 1883.

Undulating prairie, dotted with poplar bluffs. The Battle River runs south-easterly through the south half, between banks about 200 feet high. The river level is about 15 feet below the river flat, which is timbered on the south side with poplar. Deep ravines run in from both the north and the south. An old trail crosses the river in this township, the water at the ford being about 5 feet deep at time of survey (September). Soil, sandy and clay loam, with sandy and clay subsoil. First and second class.—*C. F. Miles*, 1884.

41. Outlines.—Open, rolling prairie, with scattered bluffs of poplar and brush. The soil is generally a clay loam, of fair quality, but somewhat dry. Class 1.—*L. R. Ord*, 1883.

South, Sections 1, 2 and 3 have a rolling surface, while Sections 4, 5 and 6 are undulating. There are scattered bluffs of poplar all along these sections, and the soil is generally a first class one.—*C. A. Magrath*, 1883.

42. Outlines.—Rolling prairie, with scattered bluffs of poplar, thickest in the north-east corner. Soil, sandy loam and, in places, clay loam, 15 inches deep, with sandy and clay loam subsoil. Somewhat dry, but class 1.—*L. R. Ord*, 1883.

43. Outlines.—Rolling prairie. In the western part open, with patches of brush, and in the northern sections a number of ponds and sloughs. A tract, in which the bluffs are more numerous, commences about two miles from the western boundary, and extends across the township eastward, where the bluffs, in places, form almost continuous strips of woods, some of the trees attaining a fair size. Soil, class 1.—*L. R. Ord*, 1883.

44. Outlines.—North, undulating prairie and, towards the north-east, rolling. A few grass swamps and ponds. A creek was crossed in

Section 35, running south. The soil, though gravelly in some places, with boulders of small size, is generally first class.—*T. Kains*, 1883.

Open, rolling prairie, with patches of small scrub and occasional bluffs of young poplar in the west. The hollows are often occupied by hay marshes and sloughs, and a creek from Range 14 crosses the northern part of the township. The soil of the western sections is a sandy loam, averaging 8 inches deep, with clay loam subsoil, but towards the eastern line it becomes more sandy, and the vegetation is less luxuriant. This portion of the township is open, rolling prairie, with poor soil, but would suit for grazing purposes, as there are flats of clay and stones in which, though unfit for cultivation, the grass is rich. The land would average class 2 for agricultural purposes.—*L. R. Ord*, 1883.

45. *Outlines*.—Is traversed by a creek flowing south-east to the Battle River. The land is high and undulating. In the north part are scattered bluffs of poplar. In the interior of the township are several alkaline lakes. Soil, first class.—*J. J. McArthur*, 1883.

The easterly ones of the southern tier of sections are rolling prairie; the more westerly ones are undulating. There are a few swamps and ponds. A creek, meandering south-easterly through the township, leaves by Section 2, and is supposed join Battle River. The soil is generally first class, with some gravelly places.—*T. Kains*, 1883.

46. *Outlines*.—Is high and undulating, with many swamps. A creek runs south through the west part of this township. There are many scattered bluffs of poplar. Soil, first class.—*J. J. McArthur*, 1883.

47. *Outlines*.—In the south-east part the land is undulating, with swamps and scattered bluffs of poplar. The remainder forms part of the Fifteen-Mile Plain, the soil of which is a stiff clay, with scant vegetation.—*J. J. McArthur*, 1883.

48. *Outlines*.—North, prairie, with bluffs of small poplar and clumps of willow. The line crosses a few marshes.—*C. A. Magrath*, 1883.

Sections 1, 12, 13, 24 and 25 are well wooded with poplar. The remainder of the township forms part of the Fifteen-Mile Plain, the soil of which is a stiff clay, with scant vegetation.—*J. J. McArthur*, 1883

49. *Outlines*.—Is an almost level country, with scattered bluffs of poplar and willow scrub, except the westerly tier of sections, which form part of the Fifteen-Mile Plain, the soil of which is a poor sandy loam. A coulée, 90 feet deep, crosses in Section 25 from the west, and then turns north a few chains east of the meridian, and continues this course through Section 31 of Township 49, Range 12, where it turns east. In some places along this ravine is some fair sized poplar, suitable for building purposes. The soil is a good, dark sandy loam.—*A. F. Cotton*, 1884.

50. *Outlines*.—Is rolling country, and broken by a few ravines running east into the large lake which lies in the easterly portion of

this township. The south half has scattered bluffs of poplar, while the north is thickly covered with small poplar. Sections 6, 7 and 18 form part of the Fifteen-Mile Plain. The soil is a good sandy loam ; subsoil clay.—*A. F. Cotton*, 1884.

51. Outlines.—Timber both east and west. Ponds and marshes are numerous. Small lakes in Sections 1, 7 and 25. A small creek in 36.—*M. Deane*, 1883.

52. Outlines.—North, the country is hilly, and covered with poplar and willow. In Sections 35, 36 and 33 good sized lakes were crossed.—*C. A. Magrath*, 1883.

Rolling land, covered with timber and scrub. Several ponds and marshes were crossed, and in Sections 25 and 36 a couple of small lakes. In Sections 13 and 36 creeks cross the line.—*M. Deane*, 1883.

53. Outlines.—Is hilly country, and covered with a dense growth of young poplar. The soil is a good loam ; subsoil clay.—*A. F. Cotton*, 1884.

54. Outlines.—Is hilly in the south half, and densely wooded with small poplar. The north half is undulating, and contains a large marsh and pond. A creek, 40 feet wide and 4 feet deep, runs north-easterly through the north-west part of this township, and joins the chain of lakes which form the head waters of the Vermillion River. The soil is mostly a good dark loam, subsoil clay.—*A. F. Cotton*, 1884.

55. Outlines.—Is hilly. The north half is covered with small poplar and willow, while the south half is almost open, with only an occasional bluff of poplar. The south-west corner lies in a lake with marshy margin, and is 150 feet below the hills to the north. This lake is one of the chain of lakes which forms the head waters of the Vermillion River. The soil is sandy loam and gravel.—*A. F. Cotton*, 1884.

56. Outlines.—Is hilly, and covered with a dense growth of small poplar and willows. A few patches of spruce and tamarac were seen. The soil is a good sandy loam, with gravel ; subsoil clay.—*A. F. Cotton*, 1884.

North, very rough, and is nearly all covered with poplars, and broken by high hills.—*G. B. Abrey*, 1883.

57. Outlines.—Rolling and, for the most part, wooded with bluffs of 3 to 8 inch-poplar and high grey willow. In the neighborhood of the Saskatchewan River the timber is much heavier, consisting of 5 to 12-inch poplar, 5 to 15-inch spruce, and some birch from 4 to 8 inches in diameter. This river passes through the township from Section 7 to 13, and is supplied from either side by small affluents. These and large coulées drain the country along the river. There are a few small lakes and creeks in the township. A cart trail in the western portion runs north from the Saskatchewan River to Whitefish Lake. The soil varies greatly, consisting, in some cases, of about 5 inches of black loam over clay, and, in others, of about the same depth of sandy loam over sand.—*C. A. Magrath*, 1884.

- 58. Outlines.**—Hilly, except a few sections in the south-western portion, which are very level. The eastern portion is wooded with bluffs of 4 to 8-inch poplar and willow. The western portion is wooded chiefly with a dense growth of 1 to 4-inch poplar and scrub willow. Some scattered poplar, and also clumps of spruce, from 5 to 12 inches in diameter, may be found. Lakes are numerous, and a large portion of Sections 25 and 36 is submerged. A creek about 50 feet wide passes through Section 24, in a south-easterly direction. An old trail—running north to Whitefish Lake—passes through the central and western portion, while the Victoria and Saddle Lake trail passes through Section 6. Soil, 8 inches of black loam, underlaid by clay. This may be classed as a second rate agricultural township.—*C. A. Magrath, 1884.*
- 59. Outlines.**—Is gently-rolling country, covered with poplar and spruce, and a little pitch pine. A few muskegs and swamps occur. The timber is small. The soil is a light sandy loam, and stony.—*A. F. Cotton, 1884.*
- 60. Outlines.**—Is a rolling country, covered with poplar and spruce bush, with a few muskegs. The timber varies from 2 to 8 inches in diameter. The soil is a sandy loam.—*A. F. Cotton, 1884.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XIV.

5. *Outlines.*—Rolling prairie, with surface stones on the south half of the west line. A large coulée, containing a dry watercourse was, crossed in Section 7. Soil, sandy loam, both west and east, but in many places mixed with gravel; subsoil, generally clay.—*C. E. Wolff*, 1883.

South, dry, undulating prairie, somewhat stony. The grass is rather short.—*O. J. Klotz*, 1883.

6. *Outlines.*—West, undulating and rolling country. Soil, sandy loam, in many places mixed with gravel, on a clay subsoil.—*C. E. Wolff*, 1883.

East, rolling. Soil is a sandy loam. Water scarce.—*F. W. Armstrong*, 1883.

7. *Outlines.*—East and west, rolling land; sandy loam soil. Chin Coulée crosses from Section 12 to 19. In 1 a small creek crosses the line.—*F. W. Armstrong*, 1883.

8. *Outlines.*—North, undulating prairie, with a good soil. Marsh in Section 35 and a creek in 31.—*O. J. Klotz*, 1883.

West and east, the country is rolling and the soil a sandy loam. The trail to Fort Walsh crosses from Section 12 to 18. Very little water.—*F. W. Armstrong*, 1883.

9. *Outlines.*—A very dry, rolling prairie. Soil, very light sandy loam, and bakes very hard. A few shallow sloughs. The land in many places is very stony. On Section 24 there is a long, narrow lake, in a deep gully, and in 19 a small creek.—*F. W. Armstrong*, 1883.

South, undulating prairie, with good soil. Shallow marshes occasionally, and a creek in Section 6.—*O. J. Klotz*, 1883.

Sub-division.—Rolling prairie. Soil, a sandy loam, 10 inches deep, on a clay and sand subsoil. Generally class 2. The tops of the hills are gravelly. The township is fairly adapted for agriculture, but surface water is scarce. There is no wood. The western end of a salt lake occupies the boundary between Sections 24 and 25, and 23 and 26.—*C. LeBer*, 1883.

10. *Outlines.*—East and west is a very dry, rolling country. Soil, very sandy.—*F. W. Armstrong*, 1883.

South, level or undulating prairie. Water very scarce.—*C. LeBer*, 1883.

Sub-division.—Undulating and rolling prairie. The two northerly tiers of sections are sandy, and there are many hills of pure drifting sand. Towards the centre and south the soil becomes more of a clay loam, graduating from class 2 to class 1. There are some swamps of salt water, but generally surface water is scarce. The Fort McLeod trail crosses the township.—*L. Grondin*, 1883.

- 11. Outlines.**—East and west is rolling prairie. Soil, sandy and stony. No timber along the Belly River.—*F. W. Armstrong*, 1883.

Sub-division.—Belly River enters on Section 19 and courses over 18, 20, 17, 16, 15, 10, 11, 14, 13, and leaves by 21. The river meanders very much, and passes in a valley about half a mile wide, having almost perpendicular banks of clay and gravel, and alluvial flats along the shore line. The river is about 650 feet wide and 3 to 8 feet deep, with a swift current. On both sides of the river, the land in the township is undulating. Soil, sandy loam, and finely adapted for farming, excepting the extreme south, which is sandy.—*J. McLatchie*, 1883.

- 12. Outlines.**—North, rolling prairie. Soil, sandy loam, and in some places gravel.—*C. A. Magrath*, 1882.

Is a dry, heavy, rolling prairie. Soil, sandy and stony. Some few scattered sloughs. No timber.—*F. W. Armstrong*, 1883.

Sub-divisions.—Generally level prairie. Soil, generally clay and clay loam, on clay subsoil. Classes 1 and 2. There is very little surface water, and no wood.—*L. Grondin*, 1883.

- 13. Outlines.**—North, is rolling prairie. The soil is light sand and gravel, with clay and gravel subsoil. In Section 36 the line crosses Bow River. West, is level and rolling prairie. Soil, a sandy loam, with a clay and gravel subsoil.—*C. E. Wolff*, 1882.

In the east the soil is grey clay. Bow River crosses the northern part of Section 36.—*F. W. Armstrong*, 1882.

South, dry rolling prairie. Soil, sandy loam.—*C. A. Magrath*, 1882.

Sub-division.—The Bow River touches the north-east corner. Open and gently-rolling prairie. Soil, dry sandy loam, on subsoil of sand and gravel.—*J. I. Dufresne*, 1883.

- 14. Outlines.**—Northwards and westwards it is level and undulating prairie. Soil, sand and gravel, with clay subsoil. The southern sections, as far as could be seen, consist of rolling prairie, with a light sandy and gravelly soil, on a clay and gravel subsoil. The Bow River courses in a tortuous direction through the township from Section 19, leaving by Section 1. The river has a very rapid current (about 3 feet of water) and runs in a valley about 250 feet deep, in which there is good grazing. As far as could be seen, there is no timber growing along its banks in the south-east, but there is considerable driftwood.—*C. E. Wolff*, 1882.

East, Undulating, with a grey clay soil. No water.—*F. W. Armstrong*, 1882.

Sub-division.—Open and rolling. Soil, dry sandy loam, except along the Bow River. This river takes a meandering diagonal course north-west and south-east across the township and there are fine rich belts of soil in broad terraces along its valley. Some of these belts are, however, spoiled by deep gullies in Sections 47, 48, 49 and 50. Seams of anthracite coal are exposed here and there.—*J. I. Dufresne*, 1883.

- 15. Outlines.**—The west half of the north boundary lies over alkaline hills and sloughs. The east half is undulating prairie, the soil being all sand, and growing scarcely anything but tall, rank weeds.

South and west are undulating and rolling prairie. Soil, a light sandy loam, mixed with gravel. The north half of 19 and all of 30 are in alkali hills. Water scarce.—*C. E. Wolff*, 1882.

East, undulating, with a sandy loam soil. No water.—*F. W. Armstrong*, 1882.

Sub-division.—A great part of the west half is very hilly. There is grass in the bottoms, but little herbage of any kind elsewhere. The eastern side is somewhat better and more rolling, and has some good grazing. Neither timber, creeks, springs, nor settlers in the township.—*F. Staunton*, 1883.

- 16** *Outlines*.—Going west, on the north boundary, first part is level, but towards the middle, rolling prairie. In the valleys there are numbers of shallow, saline ponds, unfit for use.—*O. J. Klotz*, 1882.

South-westwards there are alkali hills and sloughs. The soil throughout this township is all light sand and gravel. There very little grass on the hills, but most of the valleys have plenty in them. The south-east half is undulating prairie, the soil being all sand, and growing scarcely anything but tall, rank weeds.—*C. E. Wolff*, 1882.

East, undulating, with a sandy loam soil. No water.—*F. W. Armstrong*, 1882.

Sub-division.—Mostly very hilly. In some places the summits are 100 feet above the alkaline marshes which lie in the valleys. The soil is poor, light, stony and gravelly, and produces a thin crop of grass. There is a spring on Section 9. There is no timber and no settlers. The township is an inferior one for agricultural purposes.—*F. Staunton*, 1883.

- 17** *Outlines*.—Open, rolling prairie. Soil, poor and gravelly; and undulating prairie, fair soil. A lake about four miles long, of good water, lies close to west boundary of township. Soil averages class 2, and is mostly a fair sandy loam in the west and clay loam in the east, but often alternates in areas.—*L. R. Ord*, 1882.

South, Sections 1 and 2, on the south boundary, are level, after which it is rolling prairie, dotted in the early season with alkaline ponds.—*O. J. Klotz*, 1882.

Sub-division.—The first tier of easterly sections is level or moderately rolling. The other part rises in fairly bold ridges or conical hills, and might be denominated hilly. The soil is mostly sandy and clay loam on a clay subsoil, and good for cultivation. A large lake, containing fresh and good water, lies in this township. The valleys possess considerable width.—*T. Cheesman*, 1883.

- 18.** *Outlines*—Open, rolling prairie, dotted in the south-west half with small ponds of fresh water. Soil, classes 2 and 3, gravelly and stony in places, and on hill tops. In the north the soil is a clay loam. A small creek in Section 34, but water is scarce in both north and east.—*L. R. Ord*, 1882.

Sub-division.—The C. P. R. has Bantry Station here. A range of sloughs from north to south divides the township into nearly two equal parts and features. On the west it is hilly and broken. Soil, mixed with gravel and with scattered boulders, and

of little use for farming ; while on the east the surface is comparatively level. Soil, clay or sand loam, free from gravel, and class 2 for agricultural purposes. There are two small lakes in the north-west, and a muddy pond on Sections 21 and 22.—*T. Cheesman*, 1883.

- 19. Outlines.**—North, east and south, undulating prairie, with a clay loam soil. Class 2. Water scarce. Small creeks were crossed in Sections 2 and 35, and creek beds in 12.—*L. R. Ord*, 1882.

West, level prairie. Clay soil. No water.—*W. Bell*, 1882.

Sub-division.—High-rolling ridges run through the middle of the township, scattered over with large, loose boulders ; but east and west of these ridges the surface assumes a level or a gently-rolling face. The soil is generally a clay loam and clay subsoil—a good class 2. There are a few sloughs and water-courses, most of which dry up as the summer advances. The ridges mentioned are gravelly and full of stones.—*T. Cheesman*, 1883.

- 20 Outlines.**—North, soil is fairly good, and is rated principally as second class.—*T. Drummond*, 1882.

West, along the western boundary the soil is light and sandy, and may be rated second class. The surface is level or gently-undulating. Water is very scarce ; but what was found was fresh. There was no timber to be seen.—*W. Bell*, 1882.

Open and undulating prairie. Soil, class 2 ; fair, but gravelly in patches. A few small lakes.—*L. R. Ord*, 1882.

Sub-division.—Sections 11, 14 and 23, and parts of 10, 15, 22, 25 and 26, are broken by ravines, ridges and hills, some of the latter being of considerable altitude, especially the Crows Buttes. Their tops are gravelly, and scattered over with large blocks of granite and boulders. The balance of the township is level or gently-rolling, with a sandy loam soil on a sandy subsoil—a fair class 2, and fit for farming. Surface water is scarce towards mid-summer, except a shallow, muddy pond in Section 25.—*T. Cheesman*, 1883.

- 21. Outlines.**—Is an undulating prairie in its south half, and hilly and roughly broken by deep ravines in its north-east quarter. It rates first and second class in its south-east quarter, the soil being a good sandy loam, with a mixture of sand clay for a subsoil. The remainder of the township may be rated third and fourth class, being light sand, with small ponds of alkaline water. A chain of small hills occupies part of the north-west quarter of this township.—*P. R. A. Belanger*, 1883.

Sub-division.—This is not what may be considered a suitable township for agriculture, the absence of wood and water being among the objections. The soil in the southern and central portions is of an average quality, being class 2. The north-eastern portion is only fit for grazing, being much cut up by a ravine, having broken banks, nearly 100 feet high. A large creek flows through this ravine, but the water is execrable.—*F. Purvis*, 1883.

- 22 Outlines.**—The centre is broken by the Red Deer River and deep ravines running to it. The river enters the north-west angle and

runs to the south-east angle. It is a large stream, varying from 10 to 20 chains broad and from 3 to 10 feet deep, with a bottom of shifting sand; current 4 miles an hour. It abounds in whitefish, pickerel, goldeneyes and groundlings. Both shores are in many places bordered with timber suitable for fuel and building purposes, with a thick undergrowth of willows. The soil rates third and fourth class for agricultural purposes, but as a grazing land it may be considered first class on the north-east half, the grass being 1 foot high, and in abundance. The surface is generally undulating. Section 12 occupies part of the south-west slope of Hunting Hill, which is about 100 feet high, and runs into Range 13. The south-west half of this township is broken by deep ravines, and generally occupied by small sandhills, among which the ponds are mostly alkaline. A vein of coal was found in the bank of a small creek on Section 6.—*P. R. A. Belanger*, 1883.

Sub-division—The Red Deer River crosses this township from the north-west corner to the south-east corner, pursuing a bow course, first easterly and then southerly. The general width of the river is about 26 chains (1,716 feet), the depth about 4 feet, and current 200 feet per minute. The river contains several large islands, which are thickly wooded. The banks are also well wooded or fringed with poplar and whitewood and, in places, willow. Much of the timber is suitable for building purposes, and should be left for the use of settlers. The whole of the uplands of the township are light and sandy, some portions being drifting sandhills. The valley of the river contains some long stretches of fine, arable land.—*F. Purvis*, 1883.

- 23. Outlines.**—Is nearly the same as Township 24 in the general aspect of the ground and the quality of the soil, with the exception of the south part, where the sand is somewhat lighter. The west line runs through the Red Deer River in Section 6, and again in Section 7. Timber occurs on both these sections.—*P. R. A. Belanger*, 1883.

Sub-division.—The eastern portion is an open, undulating prairie, with immense clay and alkaline flats, growing, in some instances, a fair quantity of hay. The south-western and western parts are very much broken by the Red Deer River valley. A considerable quantity of poplar, white and cottonwood, grows along the banks of the river, fit only for fuel, although some might be used for buildings. Some very good flats are to be found in the valley and on the west side, but the east is valueless.—*F. Purvis*, 1883.

- 24. Outlines.**—Is undulating prairie. Soil, a light sandy loam. Class 2. A few marshes, where fresh water may be found. A small creek, 25 links wide, runs across Section 1, in an easterly direction, having 1 foot deep of excellent water, and in 19, 30 and 31 there are other creeks. In Section 18 the line crosses the Red Deer River. There is wood in the vicinity of the river.—*P. R. A. Belanger*, 1883.

Sub-division.—Chiefly rolling prairie, having a light sandy loam soil lying on a sandy subsoil, which would grow excellent

crops under a favorable rainfall. There is no wood, except in the valley of the Red Deer River, which flows through the south-west corner. A great deal of this wood is dead, and only fit for fuel. The soil of the valley is first class, but in the hills is worthless. Bull Pound Creek crosses the north-west corner in a deep and rugged valley.—*F. Purvis*, 1883.

- 25. Outlines.**—West and east, undulating prairie. Only a few marshes were crossed by these lines.—*C. F. Miles*, 1883.

South, the surface along the southern boundary is rolling, and has a sandy loam soil. The valley of a fresh-water creek, which flows down the centre of the township, and is a tributary to the Red Deer River, leaves the township by Sections 5 and 6. There is some small timber in it.—*W. Ogilvie*, 1882.

Sub-division.—Rolling prairie. Soil, a yellow and clay loam, averaging 6 inches deep, on a hard clay subsoil, all class 2, excepting that portion broken by Bull Pound Creek, which is class 3. This creek courses across the township in a south-westerly direction. It has banks from 50 to 100 feet high, enclosing a valley about a half a mile wide, and contains a plentiful supply of fresh-water. Along the creek there is red willow brush, which is very thick, about 12 feet high, and fit for fuel. This township is better suited for grazing than farming.—*G. E. MacMartin*, 1883.

- 26. Outlines.**—West and east: soil, a clay loam and clay. Classes 2 and 3. The surface is undulating prairie. A small creek in Section 7, but generally water scarce.—*C. F. Miles*, 1883.

Sub-division.—Rolling and broken prairie. Bull Pound Creek crosses the township in a south-westerly direction, and the sections through which it passes are much broken by the valley and by deep coulées, which run easterly and westerly from either sides of the creek. The soil is a yellow and clay loam, about 6 inches deep, on a hard clay subsoil, and rates class 2, with some class 3. Small red willow, of a maximum size of 3 inches, and about 12 to 15 feet high, and also willows in clumps, may be found along the creek. Well suited for grazing, as there is abundance of feed and water during the entire season. Is also, fair for farming. No minerals.—*G. E. MacMartin*, 1883.

- 27. Outlines.**—Undulating prairie. Bull Pound Creek runs south through the east half of the township, with cut banks in some places 50 feet high. A depression, with alkali beds, runs south-westerly through this township. The soil is clay loam, with clay subsoil, and rates second class.—*C. F. Miles*, 1883.

- 28. Outlines.**—North, the soil is good, with the surface gently undulating, while the ponds and marshes afford fresh water. The country south of Section 33 is broken by several coulées, which invariably show outcrops of sandstone and ironstone.—*T. Fawcett*, 1883.

The greater portion of the east half is composed of a level alkali flat, rating third class. The west half is high-rolling prairie, with a general slope southwards. The soil is a clay loam, with clay subsoil, and rates second class. The east line crosses creeks in Sections 12, 25 and 36; Muddy Lake and a marsh in

Section 13, and the trail from Blackfoot Crossing to Battleford in 24.—*C. F. Miles*, 1883.

29. *Outlines*.—The west line is in the Hand Hills. In Sections 6 and 31 creeks cross the line.—*P. R. A. Belanger*, 1883.

East, undulating and level prairie. From this boundary the country gradually falls west to a large clay flat. Several ravines, containing small creeks, nearly dry, were noticed.—*J. K. McLean*, 1884.

Rolling prairie along the southern boundary, with a soil of clay loam. Classes 2 and 3, and supplied by large lakes and marshes.—*T. Fawcett*, 1883.

30. *Outlines*.—West, rolling and hilly prairie. Several marshes were crossed, and in Sections 7 and 19 a couple of creeks.—*P. R. A. Belanger*, 1883.

The eastern portion, undulating prairie. Clay loam soil ; clay subsoil. Class 2.—*J. K. McLean*, 1884.

31. *Outlines*.—Broken and hilly prairie, with numerous intervening ponds of fresh water. A small creek, now (19th August) merely a succession of pools, runs south-east through Section 7. The soil is clay loam, with clay subsoil. Class 3.—*J. K. McLean*, 1884.

32. *Outlines*.—North, hilly prairie, with a good soil. A number of marshes were crossed by the line —*E. Bray*, 1883.

Very broken and hilly prairie. Clay loam soil ; clay subsoil. Class 3. A bay, from a lake which extends several miles west, occupies Sections 18 and 19, as well as a portion of 6 and 7.—*J. K. McLean*, 1884.

33. *Outlines*.—Broken and hilly prairie. Clay loam soil ; clay subsoil. Class 3. Section 6 is a level clay flat. In Sections 1, 24, 19 and 30 there are several large clear-water ponds.—*J. K. McLean*, 1884.

South, hilly prairie, but good soil. Several marshes.—*E. Bray*, 1883.

34. *Outlines*.—Except a strip of rolling prairie along the east side, the whole is in Sullivan's Lake.—*J. K. McLean*, 1884.

35. *Outlines*.—Nearly the whole of this township is taken up by Sullivan's Lake, a shallow, muddy lake, from six to eight miles in width, and extending north from the south limit of Township 34 of this range about twenty miles. East of the lake there is only a narrow strip belonging to the township, and it is undulating and rolling, with a few small ponds.—*J. K. McLean*, 1884.

36. *Outlines* —North, open, undulating prairie, interspersed with ponds and grass swamps, with occasional alkaline spots. For the most part, the soil is first-class, although here and there spots of second-class land occur.—*T. Kains*, 1883.

Rolling and undulating prairie. Clay loam soil ; clay subsoil. Third class. The eastern bay of Sullivan's Lake occupies the central portion of the south half of this township, and the trail from the Red Deer Forks to Edmonton crosses north of it.—*J. K. McLean*, 1884.

37. Outlines.—Open and undulating prairie, with the exception of the north-east corner, which is somewhat broken by a creek having cut banks in many places. It is about 100 feet below the prairie, which is furrowed by many ravines branching out from the valley. The north-east corner is pretty thickly wooded with poplar bluffs. The north-west corner is covered by part of a good sized lake, the whole lake probably covering 3,500 acres. The trail from Edmonton to the Forks of the Red Deer River runs south-easterly through the south-west corner of this township. Soil, clay and sandy loam, with clay subsoil. First and third class.—*C. F. Miles*, 1884.

The south is open, undulating prairie. Has ponds and grass swamps, alkaline spots, and a first-class soil.—*T. Kains*, 1883.

38. Outlines.—Is considerably cut up by deep coulées and ravines—the principal crossing the south boundary, and running northerly and easterly, with many branches from the east and west. Numerous bluffs of poplar, principally second growth, cover the north-east quarter; also several groves of spruce occur on the southern escarpment of the ravines. The water in the bottom of the principal ravine is dammed by old beaver dams, thus forming deep ponds. Soil, black sandy and clay loam, with generally a clay subsoil. First and third class.—*C. F. Miles*, 1884.

39. Outlines.—Undulating prairie, thickly dotted with poplar bluffs, and is much broken by a creek, supposed to be Beaver Dam, running easterly about 200 feet below prairie level. In the valley of this creek, and the ravines running into it, some good spruce was observed. Soil, principally dark sandy loam, with clay and sandy subsoil. First and third class.—*C. F. Miles*, 1884.

40. Outlines.—North, gently-rolling, with scattered bluffs of small poplar. Soil, first class.—*C. A. Magrath*, 1883.

Battle River runs east south-easterly across this township, in a valley about 160 feet below prairie level—the level of the river being about 15 feet below the river flats. The remainder of the township is undulating prairie, thickly dotted with poplar bluffs and willows. Soil, dark sandy and clay loam, with clay subsoil. First class.—*C. F. Miles*, 1884.

41. Outlines.—Rolling prairie, with bluffs of poplar, most numerous in the south-west corner, and occasional ponds. A good deal of of the wood is fire-killed. Soil, sandy loam, 18 inches deep, with sandy and clay subsoil. Class 1.—*L. R. Ord*, 1883.

42. Outlines.—Open, rolling prairie, with a few scattered bluffs and brush, numerous ponds and marshy sloughs. Soil, clay loam, 12 inches deep, with clay subsoil. Class 1.—*L. R. Ord*, 1883.

43. Outlines.—Nearly all open, rolling prairie, with occasional bluffs of small poplar and patches of willow bush. Shallow sloughs occupy many of the hollows. Timber of no value. Soil, sandy loam, 8 inches deep, with clay loam and, in places, gravel subsoil. Class 1.—*L. R. Ord*, 1883.

44. *Outlines*.—North, clumps of willow and small poplar are dotted over an undulating country, which, towards the east side, changes into partially first class prairie land.—*T. Kains*, 1883.

Rolling land, nearly all open, with a few tracts where the bluffs of poplar are thickly scattered, and the remainder of the township dotted here and there with patches of brush, generally in the hollows surrounding sloughs. A lake crosses the north-west corner, and the creek draining it flows eastward close to the north boundary. The soil is of good quality—a sandy loam, averaging 8 inches deep, with clay loam subsoil. Class 1.—*L. R. Ord*, 1883.

45. *Outlines*.—The western part is high and undulating, and more or less thickly interspersed with bluffs of poplar. Light soil. The east half is open and undulating. Soil, sandy loam, with clay subsoil.—*J. J. McArthur*, 1883.

Sections 1, 2 and 3 are almost up to first-class prairie land. To the west the grade is not quite so good. The surface, generally, is undulating, with clumps of willow and small poplar.—*T. Kains*, 1883.

46. *Outlines*.—Is undulating, with a few poplar bluffs, and gravel and clay ridges. Soil, a shallow, sandy loam, with clay subsoil.—*J. J. McArthur*, 1883.

47. *Outlines*.—The west is undulating, with scattered bluffs of poplar and willow. A small creek in Section 18.—*C. A. Magrath*, 1883.

The east is comparatively level, with a few poplar bluffs. Soil, a sandy loam, with clay subsoil.—*J. J. McArthur*, 1883.

48. *Outlines*.—North, timber all along this line, also several marshes, and in Section 35 a small creek.—*C. A. Magrath*, 1883.

Is level, and forms part of the Fifteen-Mile Plain. The soil is a stiff clay, in some places mixed with gravel. Vegetation scant.—*J. J. McArthur*, 1883.

49. *Outlines*.—West and south, rolling country, with bluffs of poplar and willow. The Vermillion River flows, generally north, along the west line, crossing it in Sections 18, 19, 30 and 31. Marshes and ponds are numerous.—*C. A. Magrath*, 1883.

East, undulating prairie, with a few willows in Sections 1 and 12. No water.—*A. F. Cotton*, 1884.

50. *Outlines*.—West, rolling country, with scattered bluffs of poplar and willow. In Section 6 a small creek.—*C. A. Magrath*, 1883.

East, nearly level prairie, with numerous clumps of willow in north. Lakes were crossed in Sections 12, 13 and 24; also a marsh, about a half a mile wide, in 36, and two smaller ones in 12.—*A. F. Cotton*, 1884.

51. *Outlines*.—West, rolling country, with scattered bluffs of poplar and willow. Ponds and marshes numerous. Vermillion River in Section 18, and the cart trail from Edmonton to Battleford in 19.—*C. A. Magrath*, 1883.

Wood all along the east line. Ponds and marshes numerous.—*M. Deane*, 1883.

52. Outlines.—North, prairie, much broken by numerous small marshes. Vermillion River in Section 32, and two small creeks in 35. Clumps of willow, bluffs of poplar and hills, in 34 and 36.—*C. A. Magrath*, 1883.

West, undulating, with scattered bluffs of willow and poplar. In Section 6 the line crosses the Vermillion River, and in 19 a small creek.—*C. A. Magrath*, 1883.

East, timber and scrub, with several ponds and marshes along this line.—*M. Deane*, 1883.

53. Outlines.—Level to undulating country, with patches of thick willows, interspersed with numerous ponds and swamps. A cart trail passes through the westerly side of this township and seems to have been greatly used a few years ago. The soil is excellent, being a black loam, from 2 to 12 inches deep, with a subsoil of clay or clay loam.—*T. Kains*, 1884.

54. Outlines.—Level country, containing no timber of any size; but numerous clumps of thick willows are abundantly scattered over its surface. Ponds and swamps are interspersed throughout the township, which has been rated first and second class. A cart trail passes through the south-westerly portion.—*T. Kains*, 1884.

55. Outlines.—Rolling country, with numerous willow clumps and a fair sprinkling of poplar bluffs. Ponds and swamps are numerous, and the country seems well drained by the general incline of the country to the eastward. Soil, first and second class.—*T. Kains*, 1884.

56. Outlines.—Much broken by very high hills, the northern faces of which are covered with a dense growth of small poplar and willow. Numerous ponds and swamps exist, the waters of which flow eastward into the river Saskatchewan. Soil, second and third class.—*T. Kains*, 1884.

North, timbered with poplar and scrub. The timber small, and of little value.—*G. B. Abrey*, 1883.

57. Outlines.—Is generally rolling, and wooded throughout. In the south-western portion there is a dense growth of 2 to 4-inch poplar and willow. In the remainder the timber consists of bluffs of 4 to 8-inch poplar, clumps of 5 to 15-inch pitch pine, and belts of 5 to 12-inch spruce. There is some birch along the Saskatchewan River, which passes in a south-easterly direction from Section 30 to Section 12. The river varies in width from 12 to 16 chains, while in most cases its banks are over 200 feet above the water level. Numerous coulées, with an occasional small creek, may be found feeding this river and draining the country surrounding it. There are several small lakes. The township is unsuited for agricultural purposes. The soil in the eastern portion consists of about 7 inches of black sandy loam over sand, but towards the west it becomes heavier, and a subsoil of clay, generally yellow in color, is overlaid by from 10 to 20 inches of black loam.—*C. A. Magrath*, 1884.

58. Outlines.—A few sections in the south-west are very level; otherwise, it is rolling, and wooded, for the most part, with bluffs of 4

to 8-inch poplar and high grey willow. Some portions are wooded with scattered poplar, spruce and pitch pine, from 5 to 12-inch diameter. The Victoria and Saddle Lake trail passes through from Section 30 to Section 1. There are no large bodies of water or running streams. It is, however, well watered by small lakes. The soil consists of about 5 inches of black loam over clay. It is sandy, however, where it is accompanied by a growth of pitch pine.—*C. A. Magrath*, 1884.

59. *Outlines.*—Resembles Township 60, with the exception that there are more lakes and creeks. The timber is the same, being small spruce, poplar and pitch pine. The soil is a light sandy loam, and in some places stony.—*A. F. Cotton*, 1884.

60. *Outlines.*—Is a succession of flats and ridges. The flats are almost invariably spruce and tamarac muskegs, the timber in which is small, and a great deal of it dead. The ridges, which run almost north and south, are covered with poplar, very little of which is large enough for building. A few patches of scrubby pitch pine appear here and there. The soil is a light sandy loam.—*A. F. Cotton*, 1884.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XV.

5. *Outlines*.—Rolling prairie. In the east a large portion is very undulating and thickly covered with surface boulders. Soil, sandy loam, in many places mixed with gravel, on a clay subsoil.—*C. E. Wolff*, 1883.

South, undulating. Dry, baked clay soil, somewhat stony. Vegetation thin.—*O. J. Klotz*, 1883.

6. *Outlines*.—Undulating and rolling. Soil, a sandy loam, in some places covered with surface boulders, and in others mixed with gravel, and all on a clay subsoil. A small creek in Section 6, and in 30 a large marsh comes very near the line.—*C. E. Wolff*, 1884.

Outlines.—North, undulating and rolling. Soil, a light sandy loam, with clay and gravel subsoil. The grass is very short. Chin Coulée crosses Sections 19 and 30. The banks are very stony.—*C. E. Wolff*, 1884.

East, rolling land, with a sandy loam soil. In Section 24 the line crosses Chin Coulée.—*F. W. Armstrong*, 1883.

8. *Outlines*.—Undulating prairie, with a good soil.—*O. J. Klotz*, 1883.

West, undulating and rolling. Soil, a light sandy loam, with clay and gravel subsoil. The grass is very short. The Walsh and McLeod trail was crossed in Section 18.—*C. E. Wolff*, 1884.

East, the country is rolling and the soil is a sandy loam. The trail to Fort Walsh was crossed in Section 13. Very little water along the line.—*F. W. Armstrong*, 1883.

9. *Outlines*.—South, undulating surface and a good soil. Numerous boulders in the shallow marshes.—*O. J. Klotz*, 1883.

Very dry, rolling prairie, with a very light, sandy loam soil, very stony in places. Creeks in Sections 6, 24 and 7, and in 19 the trail to Medicine Hat. In the east the surface is both hilly and rolling.—*F. W. Armstrong*, 1883.

Sub-division.—A valley, about 60 feet deep and half a mile wide, crosses this township in a north-easterly direction, and furnishes fine drainage for the land. North of the valley it is undulating prairie, soil, clay loam. South of the valley it is rolling prairie; soil, sandy loam. Both sides are good for farming or pasturage, and generally class 2. The Fort McLeod and Medicine Hat road crosses the north-west corner.—*J. McLatchie*, 1883.

10. *Outlines*.—West and east is a very dry, rolling country. Soil, very sandy.—*F. W. Armstrong*, 1883.

Sub-division.—North, rolling and hilly; south, undulating. Soil, sandy loam, on clay subsoil. Classes 2 and 3. The entire

township is suitable for stock raising, but only the south for farming. No wood. The Medicine Hat road crosses the south-corner.—*J. McLatchie*, 1883.

- 11.** *Outlines.*—West and east, rolling land, with a sandy loam soil. Creeks cross the west line in Section 7, and the Belly River between 7 and 18. No timber along this river.—*F. W. Armstrong*, 1883.

Sub-division.—Belly River crosses Sections 7, 18, 8, 9, 10, 15, 11, 14, 23, 13 and 24. The features of the river, its banks—flats and size—are similar to descriptions in Townships 11 of the 16th and 14th Ranges. The banks are a mile apart, and 150 feet high, and along them, on Sections 8 and 9, beds of coal are exposed. South of the river the surface is undulating, with a sandy loam soil, good for farming. North of the river is more broken, and the soil is a lower grade.—*J. McLatchie*, 1883.

- 12.** *Outlines.*—North, surface rolling. Soil, sandy loam.—*C. A. Magrath*, 1882.

West and east is a dry, heavy-rolling prairie. Soil, sandy and stony. Some few scattered sloughs. No timber.—*F. W. Armstrong*, 1883.

Sub-division.—A marshy valley runs north and south through this township, bounded by stony knolls and ridges. The rest of the township is undulating prairie. Soil, sandy loam on clay subsoil; class 2, and well suited for farming. No wood.—*J. McLatchie*, 1883.

- 13.** *Outlines.*—North and west, rolling and level land, with a grey clay soil. No water along the north line, but west, in Section 19, a large marsh was crossed.—*F. W. Armstrong*, 1882.

East is level and rolling prairie. Soil, a sandy loam, with a clay and gravel subsoil.—*C. E. Wolff*, 1882.

On base line, across Range 15, the surface is rolling. Soil, sandy loam.—*C. A. Magrath*, 1882

Sub-division.—Nearly level prairie. Soil, sandy clay and loam, on a subsoil of sand and gravel, class 2, but inclined to dryness.—*J. I. Dufresne*, 1883.

- 14.** *Outlines.*—North, rolling prairie. Soil, a clay and sandy loam, with a clay and gravel subsoil. East, level and undulating. Soil, sand and gravel, with clay subsoil. In Section 24 the line crosses Bow River, running in a north-easterly direction, in a valley, about 250 feet deep and three-quarters of a mile wide. There is good grazing in the valley.—*C. E. Wolff*, 1882.

West and south, rolling, with a grey clay soil. In Section 30 the Bow River was crossed.—*F. W. Armstrong*, 1882.

Sub-division.—Level prairie, except along the Bow River, which enters on Section 30 and leaves on Section 24. This river has banks 50 to 100 feet high, a current of three and a-half miles an hour, and in autumn a depth of 4 feet. Seams of anthracite coal are exposed here and there along its banks. Along the terraced valley of the river there is a rich belt of alluvial soil. Southwards, the soil is a dry, sandy loam, class 2.—*J. I. Dufresne*, 1883.

- 15. Outlines.**—Along the north boundary, for the first four miles going east, the country is level; the balance is broken and hilly. Soil, sand and gravel, with a subsoil of sand and clay. On the west the country is level and rolling prairie; along the south it is rolling only, and both south and west have a sandy and a clay loam soil on a clay subsoil. On the east it is undulating and level, except part of 24 and all of 25, which are in the Alkali Hills. Water scarce everywhere.—*C. E. Wolff*, 1882.

Sub-division.—Is a plane surface, sloping gently towards the Bow River. The north-east section is rather hilly, and a strip down the eastern boundary is of the same description. In the valley there is good grazing. The remainder of the township rates about class 2, but the grass is better southwards than northwards. The soil, generally, is a sandy clay on a clay subsoil. Surface water is scarce, and there are no running streams, and no trees. This township is a better one than No. 16, adjoining north. No settlers.—*F. Lynch-Staunton*, 1883.

- 16. Outlines.**—North, slightly undulating prairie, with dry sandy soil.—*O. J. Klotz*, 1882.

West, level prairie; good grass land. South, proceeding eastwards along the south, the first four sections are level; the easterly two are broken and hilly. Soil, sandy and gravelly. Up the eastern boundary there are alkali hills and sloughs. The western boundary is the best, having a good grey clay soil on a subsoil of clay; the grass along this line being very heavy, and making good feed. The soil, generally, throughout the township, is a light sand and gravel, with very little grass on the hills, but plenty in the valleys.—*C. E. Wolff*, 1882.

Sub-division.—Generally level or slightly-rolling prairie, with some hilly portions near its eastern boundary. The outline surveyor reports it "good grazing land," but it is not up to this grade, unless the season's rainfall is much greater than is reported. At the time of survey (July, 1883) the grass was poor and thin, and no birds were to be seen, showing that they could not obtain sustenance. There is no water fit for use, and no timber or settlers. The soil, generally, consists of a clay or a sandy clay on a clay subsoil.—*F. Lynch-Staunton*, 1883.

- 17. Outlines.**—North and west, the soil is clay, with scarcely any mould on the surface. Found it hard, from want of rain, to build mounds. The land may be rated second class, and the surface is level or gently-undulating. Water was very scarce, but the few shallow lakes or ponds found were fresh. There is no timber in this section of country.—*W. Bell*, 1882.

East, rolling prairie, with a sandy loam soil. A large body of clear water lies to the east of the line, and crosses it in Section 12.—*L. R. Ord*, 1882.

Sub-division.—Surface, undulating and high-rolling prairie. Some of the sections adjacent to the lake are hilly, but with valleys of considerable width and area, and slightly undulating. There are some boulders scattered through the township. There are a few sloughs and a small portion of the lake on the east side.

The soil is various, being either a clay or a sandy loam on a clay subsoil. Generally class 2.—*T. Cheesman*, 1883.

- 18. Outlines.**—The soil is clay, with scarcely any loam. Found it hard to dig up. Class 2. The surface is level or gently-undulating. Water was very scarce, but the few shallow lakes or ponds were fresh. No timber. The west line runs into a small lake in Section 6.—*W. Bell*, 1882.

East, the prairie is rolling and the soil gravelly. Water is scarce.—*L. R. Ord*, 1882.

Sub-division—Undulating prairie. Soil, clay loam on clay subsoil. Class 2. Fair agricultural land. In the north-western part it is light and sandy. There is a fair supply of surface water throughout the township. The C.P.R. crosses the northern tier of sections.—*G. Ross*, 1883.

- 19. Outlines.**—Surface level, or almost so. The soil is a hard, dry clay, covered with or mixed with loam, only in places may be rated second class. Surface water was very scarce, but fresh. There is no timber.—*W. Bell*, 1882.

Sub-division.—Cassils Station (C.P.R.) is on the south-west corner. High-rolling prairie, the ridges considerably broken, and and scattered over with large, loose boulders and gravel. Many large stones are embedded in the valleys. The soil varies from a sand to a sandy loam, with patches of gravel here and there, and rests on a subsoil of gravelly clay. Class 2, and is fair for agricultural purposes. A large slough occurs on Sections 33 and 34, and another on 15 and 16, and a muddy pond on 22 and 23.—*T. Cheesman*, 1883.

- 20. Outlines.**—North, the soil is fairly good, and is rated principally as second class.—*T. Drummond*, 1882.

The outlines of this township are undulating prairie. The soil is clay, of a fair quality in the west, and in the east. light and sandy. Rated second class. Surface water is very scarce, but in the few shallow lakes or ponds which occur it is fresh. No timber.—*W. Bell*, 1882.

Sub-division.—High, dry, rolling prairie, especially around a small fresh-water lake in Sections 11 and 12. This portion, and parts of Sections 3, 10, 12, 14 and 23, are strewn over with loose boulders. The soil is a friable brown clay, resting on a clay subsoil, with patches of gravel here and there, and averaging class 2 for agriculture. The marshes and watercourses usually dry up with the advance of the hot season.—*T. Cheesman*, 1883.

- 21. Outlines.**—The east half of this township is generally occupied by small sandhills, with pools of alkaline water. The soil in this part ranks third and fourth class. The west half is level or undulating prairie, of second class sandy loam. A small creek of fresh water, running north-westerly, furrows across the south-west boundary.—*P. R. A. Belanger*, 1883

South, the soil is fairly good, and principally second class.—*T. Drummond*, 1882.

Sub-division.—An average township, the surface being uniformly undulating, and the soil well adapted for the successful

cultivation of crops. Both alkaline and fresh-water marshes are numerous. The soil is a sandy loam, of from 10 to 20 inches deep, on a subsoil of sand. No wood. In Sections 35 and 36 are hills of drifting sand, and in the latter is an alkaline creek.—*F. Purvis*, 1883.

- 22.** *Outlines.*—The eastern half of this township is generally occupied by small sandhills, with pools of alkaline water. The soil in this part ranks third and fourth class. The west half is level or undulating prairie, of second class sandy loam, with the exception of the north-west quarter, where the sandhills continue. Section 36 is crossed by Red Deer River, which, at that place, is 23 chains and 50 links broad, and from 3 to 10 feet deep, with a bottom of shifting sand. The rate of its current is about four miles an hour. A small creek of fresh water—running north-westerly—furrows across the south-west boundary.—*P. R. A. Belanger*, 1883.

Sub-division.—Not suitable for agricultural purposes, as it consists mainly of small hills of drifting sand, strongly impregnated with alkaline matter. A creek, containing some very bad water, runs through the southerly tier of sections. The Red Deer River flows through the north-east corner.—*F. Purvis*, 1883.

- 23.** *Outlines.*—Township 23 is mostly level and undulating prairie. Rated second class. The Red Deer River crosses Section 12, south-westerly, and Section 1, in a south-easterly direction. On its north shore, in Section 1 is a large belt of timber, varying from 3 to 15 inches in diameter, and consisting of poplar and cottonwood. On Section 13 is a small creek running from a spring in the ravines to the river.—*P. R. A. Belanger*, 1883.

Sub-division.—Generally speaking, a poor township, 75 per cent. being sandhills. Alkaline flats and hay marshes are numerous. The Red Deer River flows through the south-east corner. Small islands of dead and decaying poplar, white and cottonwoods, are scattered along the west side. A small grove of timber, suitable for building, lies on the east bank of the river, on Section 1.—*F. Purvis*, 1883.

- 24.** *Outlines.*—North, surface broken by ravines; very stony. Soil, light and gravelly. Valley of Red Deer River and ravines occupy most of the north. This valley is about 300 feet deep, and from one and one-half to two miles wide. River about 8 chains wide; water 3 to 4 feet deep. Soil here is very sandy and light, but is well wooded with poplar and cherry. Some of the poplar would make good building timber.—*W. Ogilvie*, 1882.

The east boundary of this township runs all along through the ravines and valleys of Bull Pound Creek and Red Deer River. Bull Pound Creek crosses Section 36 in a south-westerly direction, running down to the Red Deer River. It is a small stream of fresh water, of about 10 to 20 links broad and 1 to 2 feet deep, with a sandy and gravelly bottom. It runs in a valley about 150 feet deep and half a mile broad. Patches of scrub and small timber grow along this creek and its adjoining ravines. The Red Deer River crosses partly on Section 13 and partly on Section 12, in a south-easterly direction. It is about 17 chains broad

and from 3 to 9 feet deep, with a light sand bottom and a current of about four miles an hour. It runs in a valley about one and one-half miles broad and about 300 feet deep, with abrupt clay banks. On both shores are belts of large timber, consisting of poplar and cottonwood, suitable for fuel and building purposes.—*P. R. A. Belanger*, 1883.

Sub-division.—The Red Deer River crosses the north-east portion, flowing through a valley over a mile wide. The land, west of the river, except some tracts in the valley, is worthless, being rough, hilly, sandy and stony. The soil of the uplands in the remainder of the township, is a sandy loam, light in places, but plentifully supplied with alkaline sloughs and small hay marshes. Small groves of very good timber are scattered along the valley. Bull Pound Creek joins the river in Section 25, and a good ford is found a mile below this.—*F. Purvis*, 1883.

- 25.** *Outlines.*—Undulating prairie, broken in Section 18. The west line crosses a creek in Section 7, the Red Deer River in 19, and the trail to Battleford in 30. Timber on the south bank of the Red Deer. A few marshes were crossed by the east line.—*C. F. Miles*, 1883.

The valley of the Red Deer River, with ravines running into it, occupy all the southern sections, except 1 and 6. The valley is about 300 feet deep and from one to two miles wide. The river is about 500 feet wide and 3 to 4 feet deep. Soil, sandy and light, and is well wooded with poplar and cherry, some of the former being fit for building purposes.—*W. Ogilvie*, 1882.

Sub-division.—Rolling, hilly prairie and bush, broken by the Red Deer River, which courses in a south-easterly direction, and by several coulées which run towards the river. There is abundance of good water in creeks and in the river. Soil, yellow clay loam, 6 inches deep, on a clay subsoil, mostly class 2. There is plenty of wood for fuel in the valley of the river. No minerals. Well suited for farming, and particularly for grazing, as there is grass and water in abundance.—*G. E. MacMartin*, 1883.

- 26** *Outlines.*—East, undulating prairie. A small creek was crossed in Section 12.—*C. F. Miles*, 1883.

Sub-division.—Rolling and broken prairie. It is broken by several creeks, which have high banks, and by coulées and sloughs. The water in the creeks is alkaline and ceases running after midsummer. The sloughs contain good water throughout the entire season. The soil is mostly a yellow and clay loam, averaging 4 inches deep—class 2, with some class 3—on a subsoil of hard dry clay. No wood. Well suited for grazing, having abundance of grass and water during the entire season.—*G. E. MacMartin*, 1883.

- 27.** *Outlines.*—Rolling prairie, with knolls. Soil, clay loam, with clay subsoil, and rates second class. On the west side there are several clear-water ponds.—*C. F. Miles*, 1883.

South, rolling prairie. Soil, yellow clay loam. A creek and the cart trail to Battle River in Section 1.—*G. E. MacMartin*, 1883.

- 28. Outlines.**—Rolling prairie. Soil, clay loam. Class 1. Several small streams occur, with slow currents, and especially in the west the country is very hilly, and interspersed with lakes and marshes.—*T. Fawcett*, 1883.

Rolling prairie. Soil, clay loam, with clay subsoil. Rates, second class. Water is plentiful in the west—a large pond in Section 19 and an extensive marsh in 30; while in the east, several marshes were crossed, and in Section 36 two creeks.—*C. F. Miles*, 1883.

- 29. Outlines.**—Is all occupied by the Hand Hills, the summit of which is about at the centre of the township, and slopes gradually towards east and west. The soil may be rated as second class, it being a fair sandy loam, with clay or sand subsoil. It is considerably broken on the north-east and north by deep ravines running from the hill, and by numerous ponds and hay marshes. A large lake occupies part of Sections 7, 18 and 19.—*P. R. A. Belanger*, 1883.

South, the soil is good, with the surface undulating. The surface towards the westerly boundary becomes more hilly, and is consequently more broken by lakes and marshes.—*T. Fawcett*, 1883.

- 30. Outlines.**—Is partly rolling and partly hilly prairie. The soil ranks second class in the east half, and generally third class in the west half, where it is light sandy loam. Numerous ponds and hay marshes will furnish abundance of good water.—*P. R. A. Belanger*, 1883.

- 31. Outlines.**—Except a few sections of first-class prairie near the north-west corner, this township is class 3. An alkaline flat takes up the south-west portion, the remainder being broken and hilly. A creek in Section 6, a large pond of alkaline water in 7, and several smaller ponds elsewhere.—*J. K. McLean*, 1884.

- 32. Outlines.**—North, rolling and hilly prairie, rising eastwards. In Section 31 are arms of a large lake.—*E. Bray*, 1883.

A large lake occupies the south-east quarter of this township. An alkaline valley, dotted with small lakes, runs north-west from this lake. The country is broken and hilly to the north, with rolling prairie towards the west.—*J. K. McLean*, 1884.

- 33. Outlines.**—Very broken and hilly prairie. Clay loam soil; clay subsoil. Class 3. The north-east and south-west corners are low, and have ponds of water, but the rest of the township is high and dryer.—*J. K. McLean*, 1884.

- 34. Outlines.**—The east side is taken up by Sullivan's Lake. The northern sections are undulating prairie, the remainder being very hilly. Clay loam soil; clay subsoil. Class 3.—*J. K. McLean*, 1884.

- 35. Outlines.**—Sullivan's Lake occupies nearly all the eastern half, the remainder being hilly prairie. Class 3. Occasional patches of poplar and willow scrub appear on Sections 30, 31 and 32.—*J. K. McLean*, 1884.

- 36. Outlines.**—The north line crosses the north end of Sullivan's Lake. The water is muddy and alkaline. Fine samples of lignite were noticed on the east shore, but the soil in the immediate vicinity of the lake is of poor quality, and is rated third class.—*T. Kains, 1883.*

The north-western extension of Sullivan's Lake runs through the middle of this township, with rolling prairie on each side. Clay loam soil; clay subsoil. Class 2. A little scrub on Section 6, and a creek in 7. Two ponds in 6.—*J. K. McLean, 1884.*

- 37. Outlines.**—Open and undulating prairie, with the exception of some bluffs of poplar on the north-east quarter. Sullivan's Lake—a large muddy lake—runs about a mile across the south boundary into this township. Another large lake—containing very fair water—lies partly in the north-east corner. The trail from Edmonton to the Forks of the Red Deer River runs south-easterly through the north-east corner.—*C. F. Miles, 1884*

- 38. Outlines.**—Undulating prairie, with bluffs of poplar about the centre of the township. A portion of a large lake extends from the south into the south-east corner. Clay and sandy loam soil, with clay subsoil. First class.—*C. F. Miles, 1884.*

- 39. Outlines.**—Undulating prairie, but very much cut up by Beaverdam Creek and its tributaries, which cross this township, running easterly. This creek runs in a valley about 200 below prairie level, and deep ravines enter from both sides. Besides this, there is Vermillion Creek in the north-west corner, the country adjacent to which is cut up for some distance. Some fair spruce grows in the ravines. The east half is pretty thickly wooded with poplar bluffs. Soil, generally, black sandy loam, with clay subsoil. First and third classes.—*C. F. Miles, 1884.*

- 40. Outlines.**—North, gently-rolling, with scattered bluffs of small poplar. Soil, first class.—*C. A. Magrath, 1883.*

Is considerably broken by the Battle River and Vermillion Creek, one of its tributaries, and the ravines running into them. Battle River runs easterly across the north half of this township, with a current of about two miles an hour and an average depth of 6 feet in a valley about one mile in width. Its immediate banks are about 20 feet high. The country adjacent to Vermillion Creek, and for some distance back, is much broken. Paint stone (vermillion) was observed in considerable quantities in this vicinity. Soil, black sandy and clay loam, with clay subsoil. First and third classes.—*C. F. Miles, 1884.*

- 41. Outlines.**—Rolling land, generally, crossed with bluffs of poplar, which thin out towards the northern part. The surface is dry, with occasional ponds. The soil is sandy loam and, in places, clay loam, 18 inches deep, with a clay subsoil. Class 1.—*L. R. Ord, 1883.*

- 42. Outlines**—Rolling land, with bluffs of poplars, and ponds. The soil is, in places, stony, but usually a clay loam, 10 inches deep, with clay subsoil. Class 1.—*L. R. Ord, 1883.*

43 *Outlines.*—Rolling prairie, with numerous bluffs of poplar, and patches covered by willow brush. A large portion of the land in the south-west and south parts of the township is low and wet, and covered by large marshes; but as we go eastward it becomes more rolling and dry. Here the soil is not so rich and deep, but in spite of a few gravelly patches would rank as class 1, being, in general, a sandy loam, 8 inches deep, with a clay loam subsoil.—*L. R. Ord*, 1882.

44 *Outlines.*—North, the land, which falls gradually towards a large lake that occupies most of Sections 34, 35 and 36, is of first rate quality, and is interspersed with willow clumps, small poplar bluffs and patches of excellent prairie land. Scattered along the shore of the lake bluffs of poplar are frequent.—*T. Kains*, 1883.

Rolling prairie, covered with bluffs of small poplar and willow brush, the hollows commonly occupied by grassy sloughs. The northern part seems to be overflowed by a stream, for in the north-west corner is a large tract of recently drowned land, while in the north-east corner a lake of considerable size crosses the base line, and is also surrounded by drowned land, in which the poplars and willows are either still green or recently killed. This wet area is only close to the base line. Further south the land is dry and rolling, and of excellent quality, with a black loam soil, averaging 10 inches deep, and a good loam subsoil. The wood is only good for fuel.—*L. R. Ord*, 1883.

45. *Outlines.*—A large lake nearly covers the east half of this township. The remainder is high and undulating, with many poplar bluffs and swamps. Soil, first class—*J. J. McArthur*, 1883.

A large lake extends over the easterly third. The soil, south-west of the lake, is first rate quality prairie land. There is some willow and small poplar.—*T. Kains*, 1882.

Sub-division.—Mostly poor land, and stony, excepting at the north-east corner, beyond the lake, where some of it is very good. Wavy Lake covers about 4,500 acres in the east. Parts of the township are thickly covered with thick, high willows and a good deal of brush, and there are many ponds and swamps. A considerable portion of the north part of the lake is drowned land, where dead poplar and willow brush are standing in 4 feet of water. In the north numerous marshes were crossed; also a creek in Section 34, and brûlé in 32 and 36.—*W. Beatty*, 1883.

46. *Outlines.*—East and west, undulating, with many scattered bluffs of poplar and swamps. Soil, first-class.—*J. J. McArthur*, 1883.

Sub-division.—Undulating, scrubby prairie, with patches of poplar and thick clumps of high willow. There is a large number of grassy ponds and willow swamps. The soil is a good black earth, overlaying a clay subsoil, 3 to 15 inches.—*W. Beatty*, 1883.

47. *Outlines.*—West, prairie, with scrub and bush. Marshes are numerous and large.—*J. J. McArthur*, 1883.

East, country is undulating, with scattered bluffs of poplar and willow. A small creek in Section 13. Soil, good.—*C. A. Magrath*, 1883.

- 48. Outlines.**—North, prairie, scrub and bush. Section 31 is very wet, being almost all marsh. Several other marshes were crossed, and in 36 a creek, flowing north.—*A. Magrath*, 1883.

In the western part of this township are many poplar bluffs, and the soil is good. The eastern half forms part of the Fifteen Mile Plain. Soil, inferior quality.—*J. J. McArthur*, 1883.

- 49. Outlines.**—Undulating country, thickly dotted with poplar bluffs and thick willow clumps. The poplar timber is generally small, fit only for fuel and fence rails. Numerous ponds and swamps are dotted over the surface, none of which are of large extent, and are generally shallow. The soil is a black loam, from 12 to 15 inches in depth, with a subsoil of clay or clay loam, and ranks first class.—*T. Kains*, 1884.

East, rolling country, with bluffs of poplar and willow. The Vermillion River flows, generally north, along this line, crossing it in Sections 13, 24, 25 and 36. Marshes and ponds are numerous.—*C. A. Magrath*, 1883.

- 50. Outlines.**—Undulating country, about one-half covered with poplar bluffs and willow clumps. The timber is small, and fit only for fuel and fence rails. Ponds and swamps are numerous, but of small size, and generally shallow. The soil is excellent, being a rich black loam, 10 to 15 inches deep, with a subsoil of clay.—*T. Kains*, 1884.

East, rolling country, with scattered bluffs of poplar and willow. In Section 1 the line crosses a small creek.—*C. A. Magrath*, 1883.

- 51. Outlines.**—West, Section 6 is *brulé*; balance, scrubby prairie, except about half of Section 30, which is bush. A creek was crossed in Section 18, and a lake in 19. Ponds are numerous.—*M. Deane*, 1883.

East, rolling country, with scattered bluffs of poplar and willow. Ponds and marshes numerous. Vermillion River in Section 13, and the cart trail from Edmonton to Battleford in 24.—*C. A. Magrath*, 1883.

- 52. Outlines.**—North and east, undulating prairie, with bluffs of poplar and clumps of willow. A large creek flows east, along the north line, in Sections 31, 32 and 33. In Section 1 is the Vermillion River, and in Section 24 a small creek.—*C. A. Magrath*, 1883.

West, a large lake covers part of Section 6, all of 7 and part of 18. Smaller lakes in 18 and 30, and in 18 a trail. Surface, scrubby prairie, and very fair soil.—*M. Deane*, 1883.

- 53. Outlines.**—Country falling slightly to eastward, with numerous poplar and willow bluffs, and patches of excellent prairie land. Ponds and swamps abound throughout the township, which are, however, shallow, and contain excellent water. Soil, excellent. Class 1.—*T. Kains*, 1884.

- 54. Outlines.**—The land falls gently to the east, and contains numerous ponds and swamps. The timber is heavier at the west side of the range, and gradually becomes less as we proceed eastward. This land has been rated first class, though a great variety of soil

was noticed—black loam, clay loam, sand loam, with clay and sand subsoils.—*T. Kains*, 1884.

55. *Outlines.*—Rolling country, inclined to be low and wet towards the south and east. There are clumps of thick willows, which are, in many places, burned. Poplar timber exists in fair quantities, and occasionally of sufficient size for building purposes. Soil, first and second class.—*T. Kains*, 1884.

56. *Outlines.*—Country broken by hills and lakes, and partially covered with poplar and willow, which, at the north part of the township, is of fair size. Egg Lake breaks into this township at the west side, and at the south-easterly shore of the lake the country is low and wet. Ponds and swamps are fairly numerous. A considerable creek runs south-easterly through this township, which is also cut by numerous cart trails. Soil, first and second class.—*T. Kains*, 1884.

North, partly open country. Some desirable land.—*G. B. Abrey*, 1883.

57. *Outlines.*—Is gently-rolling, with a dense growth of 1 to 3-inch poplar, and bluffs of 3 to 8-inch poplar and high grey willow. The banks of the Saskatchewan River, which passes through Section 25 in a south-easterly direction, are heavily timbered with spruce and poplar, from 5 to 12 inches diameter, and some birch 4 to 8-inch. The eastern portion is watered by numerous lakes, but in other portions the supply is moderate. The subsoil consists of blue and yellow clay, overlaid by black loam, from 10 to 24 inches deep. The township is unsuited for agricultural purposes, and has no trails.—*C. A. Magrath*, 1884.

58. *Outlines.*—Is rolling, except the north-eastern portion, where there are a few ranges of hills, about 120 feet in height. Is wooded chiefly with a growth of 2 to 4-inch poplar and willow, and bluffs of 3 to 8-inch poplar. Along the banks and coulées of the Saskatchewan River, however, the timber is heavier, consisting of 5 to 12-inch poplar and spruce. The Saskatchewan River passes through the western half, in a south-easterly direction, from Section 31. It varies in width from 12 to 16 chains, and its banks are over 200 feet above the level of the water. There are a few small lakes and creeks in the township. The Victoria and Saddle Lake trail, with a branch to Lac la Biche, passes through the north-eastern portion. The soil consists of about 10 inches of black loam over a clay subsoil. Towards the west the subsoil becomes sandy.—*C. A. Magrath*, 1884.

59. *Outlines.*—Is generally undulating, with the exception of a few sections in the south-western portion, which partake of a more rolling and sometimes hilly nature. A number of the central sections are low-lying and wet, or bottom lands. The alluvial soil in the eastern portion consists of a black loam, varying in depth from 3 to 10 inches, and underlaid by clay. Towards the west the soil is of a sandy character. The White Mud River drains Section 6, runs in a south-easterly direction, and enters the Saskatchewan River, which forms part of the southern boundary of

the township. Hills, about 125 feet high, enclose a narrow valley along the White Mud River. The township is otherwise watered by a few small affluents of this stream and other small creeks and lakes. This is essentially a bush country. Small portions of it may be classed as bluffy. The wood consists chiefly of poplar, from 4 to 8 inches in diameter, with scattered 5 to 15-inch pitch pine in the eastern, and tracts of solid pine brush in the western portions of the township. There is also some 5 to 15-inch spruce in the central sections. The Victoria and Saddle Lake trail passes through Section 6.—*C. A. Magrath, 1884.*

60. *Outlines.*—Is generally rolling, with numerous small muskegs towards the north and some flat and gently-undulating country towards its south. The soil is, for the most part, sand, sometimes overlaid by about 5 inches of black sandy loam. In low portions a stiff clay predominates. There are a few small creeks and numerous small lakes, surrounded by marsh or muskeg land. The township is densely wooded, to the east, with 5 to 12-inch spruce, with 4 to 10-inch poplar, and scattered 5 to 15-inch pitch pine; to the west, north and centre, with a dense growth of 2 to 6-inch poplar, while pitch pine may be found on small hills and knolls. There is considerable 4 to 8-inch tamarac in the northern portion, and pitch pine and scattered 4 to 10-inch poplar in the southern portion. This township is wholly unsuited for agricultural purposes, and without any cart trails.—*C. A. Magrath, 1884.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XVI.

5. *Outlines.*—Undulating and rolling. Soil, a sandy loam, with clay subsoil. The tops of the ridges in the west are solid beds of gravel, and in the east the surface is, in many places, covered with boulders. Very little surface water, and grass scarce.—*C. E. Wolff*, 1883.
- South, undulating prairie. Soil is hard and dry, and destitute of water.—*O. J. Klotz*, 1883.
6. *Outlines.*—Almost similar to Township 5. Section 18 contains a coulée and a creek, and in 1 there is a small creek, while in 25 a large marsh comes very near the line.—*C. E. Wolff*, 1884.
7. *Outlines.*—This township is almost similar to Township 5. From Sections 30 and 31 Chin Coulée crosses to 24 and 25. The banks are very stony. In the bottom of the coulée is a dry watercourse.—*C. E. Wolff*, 1884.
8. *Outlines.*—North, undulating prairie, very much waterworn, making it inferior.—*O. J. Klotz*, 1883.
- Undulating and rolling. Soil, a light sandy loam, with clay and gravel subsoils. The grass is very short, and there are surface boulders. The Walsh and McLeod trail crosses the township.—*C. E. Wolff*, 1884.
9. *Outlines.*—East and west, a very dry, rolling prairie, and soil a very light, sandy loam, and bakes very hard. The only water to be found is in a lake. The land, in many places, is very stony. A trail to Medicine Hat from here.—*F. W. Armstrong*, 1883.
- Sub-division.*—Undulating prairie. Soil, clay loam—classes 1 and 2—on clay subsoil. It is well adapted for agricultural purposes. Horse Fly Lake is situate on Sections 10, 11 and 15, and affords fine drainage for the surrounding country. It has a stony bottom, is shallow, and is marshy at the north-west end. Another marsh occurs on Sections 8 and 9. The Fort McLeod and Medicine Hat trail crosses east.—*J. McLatchie*, 1883.
10. *Outlines.*—Is a very dry rolling country. Soil, very sandy. Belly River flows through the west tier of sections. There is some timber in the river valley.—*F. W. Armstrong*, 1883.
- Sub-division.*—Level and gently-undulating, except along the Belly River, where many ravines run towards the river. The soil is a sandy loam, class 2, and is fairly adapted for agriculture, except in Sections 7, 17, 20, 23, 24, 29 and 30, where it consists of gravel and sand. Water is scarce beyond the river, and there is no wood, except in the vicinity of the river, where some exists suitable for fuel.—*A. Bourgeault*, 1883.
11. *Outlines.*—The Horse Shoe Bend of the Belly River is mostly in this township. The river courses northwards through the west-

erly sections, then flows over to the east, and courses southwards along the easterly tier of sections. There is no timber along the river. Inland from the river the soil is very light and the surface is rolling.—*F. W. Armstrong*, 1883.

Sub-divisoin—Belly River crosses through Sections 6, 5, 8, 17, 18, 19, 30, 29, 32, and leaves by 33; it re-enters by 35 and crosses 36, 25, 24, 12 and 13. The river valley is a mile wide, has almost perpendicular banks, and encloses alluvial flats formed by the river windings, which are rich for farming or pasturage. Width of river, 650 feet; depth, 2 to 8 feet. Swift current. Beds of coal, 3 or 4 feet thick, are exposed on the banks, on Sections 8 and 19. Surface, undulating. Soil, sandy loam, fine for farming, except the northern tier of sections, which is sandy.—*J. McLatchie*, 1883.

- 12. Outlines.**—North; soil, sandy loam the northerly sections are rolling and level prairie.—*C. A. Magrath*, 1882.

East and west is very rough, the surface being very broken by hills, and very stony. Very little water. No timber.—*F. W. Armstrong*, 1883.

Sub-division.—Belly river traverses Sections 2, 3 and 4, width 650 feet; depth, 3 to 4 feet, and swift current. The southern banks rise gradually, but the opposite ones are 150 feet high, very broken and precipitous, and composed of clay and gravel. A bed of coal of 3 feet is exposed on Section 4. Expanse Coulee empties into the river in Section 2. It crosses the entire township from Section 35, is half a mile wide, and increases in depth from 35 feet to 150 at the river. Elsewhere the township is undulating prairie. Soil, sandy loam, well suited for agriculture.—*J. McLatchie*, 1883.

- 13. Outlines.**—Is a rolling prairie; very dry. Soil, grey clay. The grass is very short. No wood. In Section 24 a large marsh.—*F. W. Armstrong*, 1882.

The southern portion of this township is in part level and rolling, with a sandy loam soil. Up the western side it is rolling only, and has a sandy loam soil, with the exception of some gravel ridges in Section 30.—*C. A. Magrath*, 1882.

Sub-division.—Rolling or level prairie. Soil, sandy loam on a sandy subsoil. Water is scarce. Small sloughs are numerous, but dry up early in the season. No wood. This township is well adapted for agricultural purposes.—*J. W. D'Amours*, 1883.

- 14. Outlines.**—North, east and south is a rolling prairie; very dry. Soil, grey clay. The grass is very short. There is no water, except at Bow River, which runs through the township. No wood. There are some strong indications of coal along the banks of the river.—*F. W. Armstrong*, 1883.

West, level. Soil, sandy loam, and in some places clay loam.—*C. A. Magrath*, 1882.

Sub-division.—Open, undulating prairie. Soil, a sandy loam, from 4 to 8 inches deep, on a sandy subsoil; somewhat dry. The north-east corner is broken by the Bow River, which flows towards the south-east, and contains an abundance of good water, running

with a current of three to four miles an hour. The banks of the river are from 40 to 100 feet high.—*J. W. D'Amours*, 1883.

- 15. Outlines.**—Going west, on the north boundary, level prairie to the Bow River, running through Section 32 in a south-easterly direction, in a valley about 100 feet deep, and half a mile wide; depth of water, about 3 feet, with very rapid current. The country west of the river is undulating, and the soil a dry, light sand. The east is level and rolling. Soil, a sandy and clay loam, with clay subsoil.—*C. E. Wolff*, 1882.

West, undulating prairie of good sandy loam, supporting a good vegetation of grass. No water.—*O. J. Klotz*, 1882.

Sub-division.—Dry, and nicely undulating prairie, excepting in the vicinity of the Bow River, which enters by Section 32, and coursing south-eastwards, leaves by Section 1. The river has abundance of fresh water, running with a current of three or four miles. The banks are about 100 feet high, and along them are several exposed coal seams. The average width of the river is about 800 feet. The soil of the township is a sandy and a dark loam, between classes 1 and 2.—*J. W. D'Amours*, 1883.

- 16. Outlines.**—North and west, soil good; grass long, some flowers. The Bow River, with its clear blue waters, flows through the western part. The river is about 10 chains wide, with a rapid current and stony bottom. Its sides alternate with slopes and abrupt clay banks, from 50 to 100 feet in height. Driftwood plentiful, but no green wood.—*O. J. Klotz*, 1882.

East, is rolling prairie. Soil, a good grey clay, with clay subsoil. The grass along this line is very heavy. The southern sections, from 1 to 5, are level prairie. Here the Bow River breaks the surface. The south-east corner is undulating, and the soil a dry, light sand.—*C. E. Wolff*, 1882.

Sub-division.—A high, dry and gently-rolling prairie, excepting where crossed by the Bow River, which courses down the centre of the two westerly tiers of sections. The average width of the Bow River is about 800 feet. The water is good, and the current strong, and navigable by small steamers. There are some coal veins along its banks. The soil along the river is light and sandy, but inland it is much better and, in places, classes 1.—*J. W. D'Amours*, 1883.

- 17. Outlines.**—The soil is hard clay, with scarcely any mould, second class, and the surface is level or gently-undulating. Bow River passes through this township in the south-west part, and is the only running stream. Water was very scarce, but the few shallow lakes or ponds found were fresh. No timber.—*W. Bell*, 1882.

West, soil, good sandy loam, well adapted for farming. South, as seen from the southern boundary, the soil is good and the grass long. The Bow River crosses the south-east of the township, but has been already described in Township 16.—*O. J. Klotz*, 1882.

Sub-division.—Gently-undulating, and broken by a few shallow marshes, and some coulées. Soil, generally, a clay loam and, in places, a sandy loam, all well adapted for agricultural purposes. The Bow River enters on Section 18 and flows south-east

and south. The current is rapid, the water clear and good, and about 8 feet deep ; the left bank is abrupt and precipitous, from 60 to 100 feet high, and intersected with short gullies, and the other side is sloping to the water's edge, and somewhat gravelly.—*G. Ross*, 1883.

- 18. Outlines.**—North, east and south, gently-undulating prairie. Water is scarce. The soil is generally clay. Class 2. A small lake in the extreme south of Section 1. No timber.—*W. Bell*, 1882

West, sandy loam soil, and full of depressions, 6 to 12 inches in depth, as if washed away, and more or less destitute of vegetation.—*O. J. Klotz*, 1882.

Sub-division.—Gently-undulating. Soil, grey clay loam, all good second class land, well adapted for agriculture, and having a subsoil of clay. The marshes are few in number, but contain good water. No wood.—*G. Ross*, 1883.

- 19. Outlines.**—North and south, gently-undulating prairie. Not much water. The soil is clay, and of a poor quality. In the east the surface is high, undulating prairie, with a clay soil.—*W. Bell*, 1882.

West, level prairie. Clay soil. Water scarce — *T. Drummond*, 1882.

Sub-division.—Gently-undulating. Soil—in the eastern part—light, sandy loam on clay subsoil. Sections 31 and 32 are broken by coulées ; Sections 10, 11, 22, 2, 3, 9, 12, 15, 16, 21, 27, 28 and 34 by shallow prairie, lakes and marshes. The south-western part is adapted for agriculture, and the remainder, though possessing some good land, is better suited for grazing. The C.P.R. crosses the north-east. Southesk Station is situate at the north.—*G. Ross*, 1883.

- 20. Outlines.**—North and west the soil is fairly good, and principally second class. Water is very scarce. The surface is level prairie, but in Section 7 the line crosses a coulée.—*T. Drummond*, 1882.

East and south, gently-undulating prairie, with a clay soil of fair quality. Water is scarce.—*W. Bell*, 1882.

Sub-division—Generally undulating and rolling, hilly in some places. Soil, clay loam on clay subsoil. Class 2. Sections 23 and 24 are broken by a large marsh, and a number of wet and dry smaller marshes occur elsewhere. The south-west part of the township is stony, and the alluvial soil is wanting in many places. The township is fitted for agriculture or grazing. The C.P.R. crosses the south-west.—*G. Ross*, 1883.

- 21. Outlines.**—Is level prairie ; rated second class. Soil, a fair sandy loam, is very suitable for agricultural purposes. A small creek of fresh water furrows across the east boundary of Section 36.—*P. R. A. Belanger*, 1883.

West and south, soil principally second class. Water is very scarce.—*T. Drummond*, 1882.

Sub-division.—All rolling prairie. Soil, principally clay and yellow loam, of a depth from 6 to 12 inches, but of a dry nature. Surface water is scarce, and only to be obtained in early summer. No timber. The soil is a good class 2, but owing to the lack of

moisture is below the average for farming purposes.—*G. E. MacMartin*, 1883.

- 22. Outlines.**—Is nearly the same as Township 21, with the exception of the north-east half, which is a rolling prairie of a lighter soil. A small creek runs through the east boundary of Section 1 in a north-easterly direction. The water in the ponds is mostly alkaline.—*P. R. A. Belanger*, 1883.

West, level prairie. Water scarce. Soil, both clay and sandy loam, scarcely class 2.—*T. Drummond*, 1882.

Sub-division.—Rolling prairie. Soils, composed of clay, sandy and yellow loams, 6 to 15 inches deep, but generally of a dry nature. There are two slightly alkaline lakes in Sections 12, 13 and 14. The creeks are dry. The soil is generally class 2. There is abundance of good land for settlement, and in comparison with other townships it is above the average. No wood.—*G. E. MacMartin*, 1883.

- 23. Outlines.**—West, rolling and broken surface, with knolls of sandy loam. No water.—*W. Ogilvie*, 1884.

Level or gently-rolling prairie. The soil is a light sandy loam, rated second and third class. The ponds are mostly alkaline.—*P. R. A. Belanger*, 1883.

Sub-division.—Rolling prairie, with a soil of yellow loam on a hard clay subsoil; classes 1 and 2, but mostly class 2. There are two alkaline lakes, one on Sections 29, 32 and 33, and the other on 10, 11, 14 and 15. There are also a number of fresh sloughs, but these dry up by midsummer. This is a very good township for farming. No wood.—*G. E. MacMartin*, 1883.

- 24. Outlines.**—North, surface, rolling; sandy loam flats and gravelly ridges. Soil from 10 to 15 inches deep; subsoil, sandy clay, hardened. Very little water; a few small marsh meadows. West, surface generally very knolly and gravelly. Some of the flats fair, clayey loam, about two feet deep; some ponds and many small meadows.—*W. Ogilvie*, 1882.

Level or gently-rolling prairie. The soil is a light sandy loam, rated second and third class. The ponds are mostly alkaline; however, fresh water may easily be obtained from hay marshes in the west half of the township, where the surface of the soil becomes more rolling and improves in quality.—*P. R. A. Belanger*, 1883.

Sub-division.—High-rolling prairie, broken by several alkaline lakes and numerous fresh-water sloughs. The soil is yellow and sandy loam on a hard, dry clay subsoil, excepting in the western portion, which is of a gravelly nature, and around the lakes, where it is impregnated with alkali. No wood or minerals. There is abundance of vegetation and fresh water, which will make this a good grazing township.—*G. E. MacMartin*, 1883.

- 25. Outlines.**—North, rolling prairie, with a sandy loam soil. In Section 33 the Red Deer River was crossed, and in 32 bare clay banks.—*J. J. Burrows*, 1883.

West, undulating prairie. Creeks in Sections 19 and 31, and a few small marshes. East, undulating prairie, broken in Section 13. A creek in Section 12, the Red Deer River in 24, and the trail to Battleford in 30. Timber on the south bank of the Red Deer.—*C. F. Miles*, 1883.

Sub-division.—The Red Deer River crosses the north-east quarter of the township in a diagonal direction. The valley of the river extends back on either side of the river from one-half to three-quarters of a mile. The north side of this valley is quite flat, with a gradual ascent to the abrupt clay banks, which are from 70 to 100 feet high. The south side of the valley is not so flat, but is permeated by numerous small gullies and ravines extending from the river's edge, where the bank is from 10 to 25 feet high. This unevenness extends back from the river for from one-half to one and a-quarter miles, where it meets a series of clay banks of from 60 to 120 feet high. The remainder of the township consists of gently-rolling prairie, with a sandy loam soil on a clay subsoil. Class 2. The soil in the valley of the river is of a better quality, being a clay loam on a clay subsoil.—*J. J. Burrows*, 1883.

- 26. Outlines.**—Rolling prairie, broken in the west, in Sections 7, 18 and 19, by the Red Deer River and its banks. This line also crosses creeks in 6, 7 and 19, and a small lake in 31. The soil is a sandy loam. Class 2.—*C. F. Miles*, 1883.

Sub-division.—The Red Deer River crosses diagonally the south-west quarter of the township. There is a narrow belt of poplar and willow along the river, suitable for fuel only. The south half of the township is much cut up by ravines, while the north half is of a gently-rolling character. The soil is of a good quality of sandy loam, averaging 7 to 10 inches deep on a clay subsoil.—*J. J. Burrows*, 1883.

- 27. Outlines.**—The greater part of this township is very hilly, with prairie intervening. There are also alkaline depressions. Soil, clay loam, and rates second and third class. The west line crosses a large pond in Section 7, a creek in 18, and an old trail in 30, and in the east a number of clear-water ponds were observed.—*C. F. Miles*, 1883.

- 28. Outlines.**—North, the easterly portion is very hilly, and much broken; but from Section 35, westward, the country is well drained into a large lake, $2\frac{1}{2}$ miles south of the line. A large stream, with high banks, bearing south-west, empties out of the lake, south of the line, into the Red Deer River.—*T. Fawcett*, 1883.

The greater part is very hilly, with intervening prairie, except in the north-west quarter, which is undulating and sloping to the south. There are ponds and alkaline depressions. In the south quarter there is a lake containing good water, and covering about 2,500 acres. It is said to contain whitefish. It empties south-west into the Red Deer River. In Sections 19, 30 and 31 creeks cross the west line, and in the east the line crosses a large pond in Section 24 and an extensive marsh in 25.—*C. F. Miles*, 1883.

29. Outlines.—Occupied by a large plateau, sloping gradually from the centre towards the east and the west, and forming part of the Hand Hills. Sections 1, 3, 10, 11 and 12 appear to be very hilly, and broken by deep ponds and marshes. A large lake, apparently very deep, with sandy bottom and gravelly shores, occupies parts of Sections 11 and 12, and all of 13, 14, 23, 24, 25, 26 and 35. This lake is about 5 miles long, by 2 miles wide. Its water is very saline. The soil is second class in the east half, and first class in the west half, where it is a rich black loam, with a clay subsoil. Around the lake are patches of willows, that may be used for line pickets or fuel.—*P. R. A. Belanger*, 1884.

Southwards, undulating prairie. Soil, clay loam, of 15 inches deep, on clay subsoil. Class 2. The south-east is hilly.—*T. Fawcett*, 1884.

30. Outlines.—West, broken and hilly. A creek in Section 19, and a couple of ponds in 31.—*J. K. McLean*, 1884.

Heavy-rolling prairie in the north half, and rough, hilly prairie in the south half, where the deep ravines and gullies of the north side of the Hand Hills originate. These hills appear about 200 feet above level prairie, and are very rough. Water is in abundance in hay marshes and ponds, of which some of the latter are alkaline. There are also springs running from the hills. There are a few patches of small timber in the ravines, suitable only for fuel. The soil ranks second and third class.—*P. R. A. Belanger*, 1884.

31. Outlines.—Except Sections 23 and 42, which are broken and hilly, and Sections 1, 12 and 13, nearly the whole of which are in an alkaline flat, this township is rolling prairie, clay loam soil, and clay subsoil. Class 2.—*J. K. McLean*, 1884.

32. Outlines.—North, rolling prairie, with a good soil. A large lake in Section 36, and a much smaller one in 31.—*E. Bray*, 1883.

Rolling prairie. A small creek, nearly dry (2nd September), crosses the southern sections. Clay loam soil; clay subsoil; class 2. Several ponds were crossed, and in Section 25 is an alkaline flat, while the greater part of 36 is an alkaline lake.—*J. K. McLean*, 1884.

33. Outlines.—An alkaline flat, dotted with small lakes, extends from the south-east to the north-west corner. East of this flat it is hilly prairie, while west it is rolling prairie, with sand loam soil, clay subsoil. Class 2. Large bodies of water in Sections 6, 30 and 31, the greater part of 30 being under water.—*J. K. McLean*, 1884.

South, rolling prairie with a good soil. A long lake extends north-west into the township from the south-east corner.—*E. Bray*, 1883.

34. Outlines.—Nearly the whole is very broken and hilly, with ponds intervening. Clay loam soil; clay subsoil. Class 3.—*J. K. McLean*, 1884.

35. Outlines.—The sections along the northern and western boundaries are rolling prairie, the remainder being very hilly. Clay loam soil; clay subsoil. Class 3. Water abundant.—*J. K. McLean*, 1884.

36. Outlines.—North, undulating or level prairie. A few grass swamps. Soil, generally first class.—*T. Kains*, 1883.

Rolling and undulating prairie. Clay loam soil; clay subsoil. Class 2.—*J. K. McLean*, 1884.

37. Outlines.—Is an open, undulating prairie, intersected by a few dry watercourses. Soil, sandy and clay loam on clay subsoil, somewhat stony. A dry watercourse, with standing pools of water, crosses and re-crosses the east boundary, with a southerly course into Sullivan's Lake. Second class.—*C. F. Miles*, 1884.

38. Outlines.—Undulating prairie, with some scattered bluffs of second growth poplar and willows. The trail from Edmonton to the Forks of the Red Deer River runs south-easterly through the north-east corner. Big Knife Creek leaves this township, running north-westerly in Section 30. This creek is still inhabited by beavers, which have dammed the creek in many places, thus forming a series of deep ponds. Soil, sandy and clay loam, with clay subsoil. First class.—*C. F. Miles*, 1884.

39. Outlines.—Consist of undulating and nearly open prairie. It is somewhat broken by Vermillion Creek, and more especially by ravines and alkaline depressions or washouts on the north-east quarter. Groves of poplar bluffs were observed about the centre of the township. Soil, black sandy loam, with clay subsoil. Second class.—*C. F. Miles*, 1884.

40. Outlines—North, near the Battle River the country is heavily wooded. The river valley is about one mile wide and 170 feet deep. On the west side of the river is a very fine grove of spruce, many of the trees being 100 feet high, and from 8 to 20 inches in diameter. Leaving the valley of the river the line follows up a deep ravine, well timbered with poplar. Soil, first-class.—*C. A. Magrath*, 1883.

Undulating prairie, interspersed with bluffs of poplar and willows. Vermillion Creek meanders through the south half. Battle River runs south-easterly through Section 36, in a valley about a mile wide and more than 200 feet below prairie level. The valley is wooded with poplar of good size, with good spruce in the ravines on the south side of the river. The north-east quarter is rather broken by ravines running into the valley of Battle River. Soil, sandy loam, with clay subsoil. First and second class.—*C. F. Miles*, 1884.

41. Outlines.—Rolling land, a good deal broken by ravines to the Battle River Valley, which crosses from Sections 18 and 19 to 2 and 3. The valley is wooded with poplar and occasional spruce, and is about one mile wide and 200 feet deep. The stream is very crooked, with gravel and clay banks. The township is mostly wooded with poplar, and occasional ponds dot its surface. The soil is a sandy loam, some 18 inches deep, with a sandy loam subsoil, and ranks as class 1.—*L. R. Ord*, 1883.

The southern part of the country is heavily wooded in the vicinity of the river. Some of the spruce in the ravines are 100 feet high. The soil is first-class.—*C. A. Magrath*, 1883.

Sub-division.—Battle River crosses the south-west corner, through a valley about 60 chains wide, on an average, and 150 feet deep. This valley has a very poor quality of soil, being a hard white clay. That portion of the township lying on the north side of the river is very fair quality of land, being an alluvial deposit of black loam, from 8 to 12 inches deep, and clay subsoil. It is a very desirable place for settlement. Poplar grows in sufficient quantities for fuel and fencing. Along the south bank of the river valley, and in a ravine running through the south tier of sections, small quantities of spruce, fit for building purposes, can be obtained. That part lying on the south side of the river is much broken by ravines. The soil is adapted for grazing, and has a good supply of water.—*W. Crawford*, 1884.

42. Outlines.—Rolling land, generally open, with patches of scrub and bluffs. In the south-west corner the surface is very wet, with willow marshes, and here the soil is of fair quality, but in the greater portion of the township it is a very dry clay loam, less than 10 inches deep, with a hard, baked clay subsoil. Ranks second and third class.—*L. R. Ord*, 1883.

43. Outlines.—Rolling prairie, with bluffs of poplar and willow brush, the wood of small size. The land is well drained, and dry; but in places the soil is shallow, and is a sandy loam, with clay and clay loam, but in places a gravelly subsoil. Class 1.—*L. R. Ord*, 1883.

44. Outlines.—North rises slightly to the east, and contains a great many swamps, large ponds and numerous clumps of willows, with a few poplar bluffs. The supply of timber is not large, and the dimensions of it too small to be of any use for building purposes, although suitable for fuel and fence rails.—*T. Kains*, 1883.

Rolling land, with bluffs of poplar, willow brush and marshy stretches. The soil is of good quality, though not well drained in the northern portion, and improves south. The soil is a black sandy loam, with clay and a clay loam subsoil. Class 1.—*L. R. Ord*, 1883.

45. Outlines.—East and west, undulating, with small scattered bluffs of poplar and many swamps. A lake encroaches on the north-west corner. Soil, first class.—*J. J. McArthur*, 1883.

Sub-division.—There are about 1,200 acres of water in the north-west corner. South of this the western part is greatly broken with willow swamps and muskegs. The remainder of the township is undulating, scrubby prairie, with here and there bluffs of poplar and willow swamps. The soil is of fair quality, generally class 2.—*W. Beatty*, 1883.

46. Outlines.—Bush and scrub, alternating with prairie. Several marshes and ponds. The west is much broken by a large lake or marsh. There are many patches of poplar and willows. Soil, first class.—*J. J. McArthur*, 1883.

Sub-division.—The western side is mostly under water from 2 to 10 feet. In the shallower portions of the lakes dead willow and small poplars are standing, showing a recent increase in the area of the water. The soil of the township is good, and the general surface is rolling, scrubby prairie, with frequent bluffs of poplar and willow.—*W. Beatty, 1883.*

47. *Outlines.*—Undulating, and intersected with poplar bluffs. Soil, first class. The marshes are numerous and large.—*J. J. McArthur, 1883.*

48. *Outlines.*—North, alternate prairie and bush, with a little scrub. Several marshes were crossed, and in Section 32 a little brulé.—*C. A. Magrath, 1883.*

Undulating, with scattered poplar bluffs and swamps. Soil, first class —*J. J. McArthur, 1883.*

49. *Outlines.*—Undulating country, thickly dotted with poplar bluffs and willow clumps, the timber of which is small, and unfit for building purposes. Numerous small ponds and swamps are scattered over the surface. The soil is first class, being a rich vegetable mould from 10 inches to 15 inches in depth, with a subsoil of clay or clay loam.—*T. Kains, 1884.*

50. *Outlines.*—Undulating country, about one-half covered with poplar bluffs and willow clumps, the timber of which is generally small. Numerous ponds and swamps are scattered throughout the township, on the west side of which they are more abundant and of larger area than in the interior. The soil is good, being a black loam, from 12 to 15 inches, a clay or clay loam on subsoil.—*T. Kains, 1884.*

51. *Outlines.*—West, the country is scrubby. Numerous lakes and ponds. East, also scrubby prairie, except about half of Section 25, which is bush. A creek in Section 13, a lake in 24, and small ponds generally distributed.—*M. Deane, 1883.*

52. *Outlines.*—North, willow and scrub, with bluffs of poplar. Marshes and ponds —*C. A. Magrath, 1883.*

All scrubby prairie, with a little bush. In Section 30 a trail. A large lake covers part of 1, all of 12, and part of 13. Smaller lakes in 13 and 25.—*M. Deane, 1883.*

53. *Outlines.*—Rolling to undulating country, with poplar bluffs and willow clumps, the timber of which is generally small. Ponds and swamps alternate with fine prairie openings, which contain land of first class quality. The ponds are larger at the west side of the range, and the timber seems heavier and more abundant at the north side of the township than it is elsewhere.—*T. Kains, 1884.*

54. *Outlines.*—Undulating country, dotted with numerous ponds and swamps, which are heavily fringed with thick, large willows. Poplar bluffs are numerous, and contain large quantities of good sized timber. Soil, first class. A cart trail from Beaver Lake to Victoria passes through the north-west corner.—*T. Kains, 1884.*

55. Outlines.—Undulating country, containing some heavy poplar in scattered bluffs, and occasional clumps of spruce. This township is pretty fairly covered with willows, and broken considerably by ponds and swamps. Several cart trails run through it. Soil, good. Classes 1 and 2.—*T. Kains, 1884.*

56. Outlines.—Is broken by Egg Lake, which occupies almost one-third of its area. The country around the lake is low and wet, affording large quantities of hay. Blue Quill's band of Indians has a settlement at the north-west part of the township. The remainder of the township is rolling country, containing some fine poplar and spruce. The soil is excellent and, on the survey lines, has been rated first class.—*T. Kains, 1884.*

North, the surface is quite flat and wet.—*G. B. Abrey, 1883.*

57. Outlines.—Undulating country, heavily timbered at west side of range with poplar, willow and spruce. The poplar in the centre and easterly portions of the township is generally small. Some very large muskegs were crossed on the west boundary. Ponds and swamps are numerous. Egg Lake Creek runs north through the westerly part, and a cart trail to Victoria passes also along the easterly bank of the creek. Soil, first and second class.—*T. Kains, 1884.*

58. Outlines.—Is broken by the River Saskatchewan, which enters it about the middle, and flows easterly. In the vicinity of the river the timber is large, and consists of poplar and spruce. The north trail to Battleford is located on the north side of the river. The country on the south side of the river is partially open, being thickly dotted with poplar bluffs, willow clumps and numerous ponds and swamps. Some fine patches of spruce north of the river. Soil, second class.—*T. Kains, 1884.*

59. Outlines—Is generally rolling, with the exception of a few sections in the central and more southerly portions, which are gently undulating. Soil, a black sandy loam, from 3 to 10 inches, generally underlaid by sand. In some places a black loam, overlying clay. The White Mud River passes through Section 31, and is supplied from both sides by small affluents. It is about 50 feet wide, 5 feet deep, has a mile and a-half current, courses through a valley which is about half a mile wide, and is flanked on either side by a range of hills. There are numerous small lakes in the township. The eastern portion is wooded with 5 to 12-inch pitch pine. Other portions are wooded with 4 to 8-inch poplar, and small, narrow belts of 5 to 12-inch spruce. There is considerable open and bluff country in the central part. An old cart trail passes through the township from Section 13. The country is unsuited for agricultural purposes.—*C. A. Magrath, 1884.*

60. Outlines.—Generally rolling, with a few ranges of small hills. There are numerous muskegs in the north and marshes in the south. One large creek, 50 feet wide, 2 feet deep, current two miles per hour, which follows the western boundary in Sections 31 and 30 in a southerly and thence south-easterly direction, drains considerable of the north-westerly and central portions of the township

Another creek, of similar size and volume, bordered on both sides by willows, passes through Section 6. Numerous other small creeks, which rise in small, deep lakes, and flow, for the most part, in a southerly direction, serve to drain the township. The soil consists chiefly of sand, sometimes overlaid by 3 to 8 inches of black sandy loam. This township is densely wooded—in the eastern and central portions with 4 to 8-inch poplar, some 5 to 12-inch pitch pine, and belts of 5 to 12-inch spruce in the northern and north-western portions, with 4 to 8-inch tamarac and poplar, with heavy pitch pine on the small hills and knolls, and in the west with 4 to 8-inch poplar, and some pine and tamarac. An old cart trail, passing through Section 6, follows the valley of the White Mud River. The township is unsuited for agricultural purposes.—*C. A. Magrath, 1884.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XVII.

5. *Outlines*.—Surface, undulating. Soil, gravelly clay, with clay subsoil in the west, and sandy loam, on clay and gravel subsoil in the east. In Section 18 is a large fresh-water lake, half a mile wide, and extending about three miles east and one mile west of the line.—*C. E. Wolff*, 1883.

South, rolling prairie. Soil, dry and hard; vegetation poor; some alkaline ponds; a creek in Section 3.—*O. J. Klotz*, 1883.

6. *Outlines*.—Surface, undulating. Soil, gravelly clay, with clay subsoil in the west, and sandy loam, with clay subsoil, in the east. Surface stones in Section 6. A creek and coulée stretches from Section 30 to 13.—*C. E. Wolff*, 1884.

7. *Outlines*.—Rolling and undulating country. Soil, a light sandy loam, in many places covered with small surface boulders. The country is very dry. In Sections 35, 25 and 36 is Chin Coulée. Very stony.—*C. E. Wolff*, 1884.

8. *Outlines*.—North, undulating prairie, with sandy loam soil and good grass. Water scarce.—*O. J. Klotz*, 1883.

Dry and rolling prairie. Soil, a light sandy loam, having small surface boulders in places. In Sections 19 and 30 an alkaline lake was crossed in Chin Coulée. The Walsh and McLeod trail crosses the township.—*C. E. Wolff*, 1884.

9. *Outlines*.—East and west is very dry, rolling land. The soil is very light sandy loam. Growth of grass short. The trail to Medicine Hat crosses the township. A large marsh between Sections 30 and 31.—*F. W. Armstrong*, 1883.

South, good undulating prairie, covered with good grass and flowering vetches. Rather deficient in water. Sandy loam soil.—*O. J. Klotz*, 1883.

Sub-division.—Level and gently-undulating prairie, with a sandy and a sandy loam soil. Classes 1 and 2, but rather dry at time of survey (September). The Fort McLeod trail crosses the township. There is a scarcity of surface water, and no wood whatever.—*A. Bourgeault*, 1883.

10. *Outlines*.—East and west is very rough and broken, being cut up by Belly River, and some very deep and long coulées running into it from the south. The soil is very sandy. There is some timber along the river.—*F. W. Armstrong*, 1883.

Sub-division.—Much broken by the gullies of the Belly River, which crosses Sections 19, 20, 17, 8, 9, 10, 11 and 12, and also 36. The soil is a sandy loam, of class 2, and is gravelly in many places. No wood.—*A. Bourgeault*, 1883.

11. *Outlines*.—Is a very dry, rolling prairie. Soil, sandy and gravelly. A creek in Section 36.—*F. W. Armstrong*, 1883.

Sub-division.—Undulating and level. Soil, a good clay loam on a subsoil of clay, class 1, and suitable for farming purposes. Water is scarce, except in the Belly River, near the south-east. No wood, but a coal location occurs at the middle crossing of the Belly River.—*P. Gosselin*, 1883.

- 12.** *Outlines.*—North, the country is hilly. Soil, clay loam.—*C. A. Magrath*, 1882.

East and west is dry, rolling prairie. Soil, sandy and stony. No timber. Water scarce.—*F. W. Armstrong*, 1883.

Sub-division.—Partly rolling, partly undulating. Soil, a good clay loam and, in some places, a black loam on clay subsoil—class 1—and well adapted for farming. Water is scarce.—*P. Gosselin*, 1883.

- 13.** *Outlines.*—North and west the land is undulating or gently-rolling, and first class sandy loam, with a kind of grey clay subsoil. Abundance of grass. Water is very scarce.—*P. R. A. Belanger*, 1882.

East, rolling, with the exception of some gravel ridges in Section 25. Soil, sandy loam. In the south the country becomes hilly, and has a clay loam soil.—*C. A. Magrath*, 1882.

Sub-division.—The land is good, but is light and sandy in places. The east is slightly rolling, but the west half is rather hilly. There is no wood or brush. Small sloughs are very abundant, but all dry up after the heat of summer begins. The soil is composed of a sandy loam on a sandy subsoil. Classes 1 and 2.—*J. W. D'Amours*, 1883.

- 14.** *Outlines.*—Surveyed the north, south and west. This township resembles No. 13 of this Range.—*P. R. A. Belanger*, 1882.

East, level. Soil, sandy loam, and in some places clay loam.—*C. A. Magrath*, 1882.

Sub-division.—Beautifully rolling prairie, mostly composed of a fine loam and clay, ranking class 1 for agricultural purposes. Small sloughs are abundant, but dry up with the heat of early summer, after which surface water is scarce. There is good, sweet grass all over the township. No wood.—*J. W. D'Amours*, 1883.

- 15.** *Outlines.*—North, south and west, undulating or gently-rolling, having a soil of a good sandy loam, lying on a kind of grey clay subsoil, and covered with abundance of grass. There are small pools of water of good quality.—*P. R. A. Belanger*, 1882.

East, undulating prairie of good sandy loam, supporting a good vegetation of grass. No water.—*O. J. Klotz*, 1882.

Sub-division.—Rolling prairie, and may be ranked class 1 for agricultural purposes, although surface water is scarce. The soil consists of sandy and black loams—class 1—lying 3 to 6 inches deep, on a clay subsoil.—*J. W. D'Amours*, 1883.

- 16.** *Outlines.*—North and east, undulating prairie of good sandy loam, supporting a good vegetation of grass, but water scarce.—*O. J. Klotz*, 1882.

Undulating or gently-rolling. Second class. Sandy loam; grey clay subsoil, covered with an abundance of grass. Water scarce.—*P. R. A. Belanger*, 1882.

Sub-division.—Mostly open, undulating prairie, dry and a little stony. Soils, dark and sandy loams—classes 1 and 2—on sandy clay and sandy subsoils. Sections 21 and 28 are broken by an alkaline lake, which is muddy and stony. The prairie in the vicinity of the lake is also very stony.—*J. W. D'Amours*, 1883.

- 17.** *Outlines.*—West and east, undulating prairie, with some stony ridges, a stiff clay soil and scant vegetation. Bow River meanders easterly through this township, and varies in width from eight to ten chains, with a rapid current—five and a-half miles an hour—stony bed and good clear water; the banks vary in height from 150 to 200 feet. Rates second class.—*C. F. Miles*, 1883.

East, soil, good sandy loam, well adapted for farming. The Bow River crosses near the centre of this boundary. South, undulating, dry prairie, with good vegetation.—*O. J. Klotz*, 1882.

Sub-division.—Bow River enters by Section 31 and crosses, by a very crooked course, south-east, south-west and east, leaving at Section 13. Grassy Island—formed by two channels on Section 15—is 12 feet above summer level, and rich with grass. The river is about 650 feet broad, 7 feet deep, and swift. The valley is about a mile wide, with banks 100 to 150 feet high. The right bank is steep and broken, and abuts the river; but the left bank base is distant from the river about half a mile, and the intervening space is occupied by fertile flats. On Section 10 is an outcrop of coarse sandstone, and a seam of superior lignite coal about 15 feet thick. Exposures of coal also occur on the River Lots 9 to 16, 37 and 38, in seams of 6 to 10 feet. The township is undulating, with clay loam soil, and well suited for farming.—*G. Ross*, 1883.

- 18.** *Outlines.*—West, principally undulating prairie. Soil, of a variable clay and sandy loam, with clay and sandy subsoil. Rate principally second class. In Section 18 is a small creek, and in 30 and 31 a couple of small marshes.—*C. F. Miles*, 1883.

East, sandy loam soil, and full of depressions, 6 to 12 inches in depth, as if washed away, and more or less destitute of vegetation.—*O. J. Klotz*, 1882.

Sub-division.—The eastern part is undulating and dry; the western is principally high and rolling. Soil, chiefly a clay loam on a clay subsoil, and slightly broken by marshes, making the whole township well fitted for agricultural purposes. The grass, north-westwards and northwards, is rich and long.—*G. Ross*, 1883.

- 19.** *Outlines.*—West, open, rolling prairie, rating principally second class. The soil varies from a sandy loam to a clay loam, with some gravelly knolls.—*C. F. Miles*, 1883.

East, level and dry prairie.—*T. Drummond*, 1882.

Sub-division.—Undulating prairie. Soil, clay loam on clay subsoil, slightly broken by marsh land, which dries up towards fall. Sections 35 and 36 are broken by a shallow lake having alkaline water. The township is well adapted for agriculture. No wood.—*G. Ross*, 1883.

- 20.** *Outlines.*—North and east the soil is fairly good, and is rated principally as second class. Water is very scarce, as the surface is

level prairie. In Section 12 a coulée was crossed.—*T. Drummond*, 1882.

West, open, rolling prairie; rates principally second. The soil varies from a sandy loam to a clay loam, with some gravelly knolls.—*C. F. Miles*, 1883.

Sub-division.—South and south-west the township is dry and undulating. Soil, clay of fair quality. A shallow alkaline lake breaks upon Sections 2 and 3. The remainder of the township has a light sandy soil, which has a good growth of grass, except the extreme northern quarter sections, which are very sandy. Parts of Sections 22, 23 and 28 are broken by a marsh. With these exceptions, the township is good for farming and grazing. The C. P. R. crosses the township, and has Latham Station.—*G. Ross*, 1883.

- 21. Outlines**.—Sections 6, 7, 18, 19 and 30 are undulating, while 31 is hilly. In 6 are some small sandhills. Boulders in 19 and 30. No water was found, though a dry alkali slough was crossed in 6. Soil, light sandy loam, averaging second class.—*C. F. Miles*, 1882.

East, dry and level prairie.—*T. Drummond*, 1882.

Sub-division.—Divided into level, rolling and hilly prairie. It has two small alkaline lakes and a few small sloughs of fresh water, which, together with some creeks, dry up towards mid-summer, so that good water is not plentiful. The soil is composed of yellow clay and gravelly loams. There are also a few sections strongly impregnated with alkali to the depth of 2 feet. No timber. A fair township for farming. Mostly class 2.—*G. E. MacMartin*, 1883.

- 22. Outlines**.—North, rolling and hilly prairie. The alluvial soil is 4 inches deep, resting on a clay subsoil. Along this line water is scarce.—*A. W. McVittie*, 1882.

Undulating and broken prairie, with soil principally clay loam, and covered with boulders in many places. Mostly second class. In Sections 19 and 30 is a large, dry alkaline slough.—*C. F. Miles*, 1882.

East, level prairie. No water was found in this six miles.—*T. Drummond*, 1882.

Sub-division.—Divided into high, rolling, hilly and level prairie, with soils composed of yellow clay and gravelly loams of fair depth, averaging class 2. The township is suitable either for farming or grazing, and compares favorably with any of the surrounding townships. The hills are small, and thickly covered with vegetation, and the sloughs, though not numerous, are fresh. An alkaline lake lies along the west boundary.—*G. E. MacMartin*, 1883.

- 23. Outlines**.—West, rough and hilly prairie, with numerous sloughs, many of them dry. The soil is clay, with a little surface gravel and field stone. This township ranks as third class. South, rolling and hilly prairie, the soil 4 inches, on a clay subsoil. Water is scarce.—*A. W. McVittie*, 1882.

East, generally very knolly and gravelly. Some of the flats fair clayey loam, about 2 feet deep. Some ponds, and many small meadows.—*W. Ogilvie, 1882.*

Sub-division.—High, rolling and hilly. The hills are small and the sloughs in the valleys numerous and fresh, and all shallow, except one in Sections 14 and 23. A lake along the northern boundary is alkaline. The soil is composed of yellow, grey and clay loams, of a fair depth, and class 2. There is no wood, and no minerals. This township is a fair one for settlement.—*G. E. MacMartin, 1883.*

24. *Outlines.*—North, surface very rough, with light gravelly soil; subsoil gravel. Many small meadows. There is a large ravine running northerly and southerly. Alongside this ravine there is a ridge of high hills, which rise about 200 feet above the plains. East, surface generally very knolly and gravelly; some of the flats fair, clayey loam; some ponds, and many small meadows.—*W. Ogilvie, 1882.*

West, rough and hilly. Numerous sloughs, many of them dry. The soil is clay—third class.—*A. W. McVittie, 1882.*

Sub-division.—High-rolling and hilly, a number of the hills being very high, especially those on either side of an old river bed which runs south-west. There is a large lake on Sections 3, 4, 9 and 10, the water of which is slightly alkaline. The sloughs are fresh, and there is a good spring on the north boundary of Sections 33 and 34. The soil consists of yellow clay and gravelly loams, of fair depth, and class 2, with some scattering boulders. This township is well suited for grazing, as vegetation is good on both high and low lands, and shelter among the hills. No wood.—*G. E. MacMartin, 1883.*

25. *Outlines.*—West, hilly country. No water.—*T. R. Hewson, 1883.*

East, undulating prairie. Creeks cross the line in Sections 24 and 36. A few small marshes were crossed.—*C. F. Miles, 1883.*

Southwards, rough, gravelly, and with many small meadows. A deep ravine and a ridge of high hills cross the southern boundary.—*W. Ogilvie, 1882.*

Sub-division.—Rolling prairie. The soil of the northern tier of sections, and of the western half of the township, is of better quality than that found in the remaining parts. The soil, generally, is a sandy loam, having chiefly a clay subsoil, and is class 2, on an average. A valley, 75 feet deep, crosses Sections 3, 10, 11, 14, 23, 24, 25 and 36.—*J. J. Burrows, 1883.*

26. *Outlines.*—West, very hilly and rolling country. In this six miles no water was crossed.—*T. R. Hewson, 1883.*

East, rolling prairie, broken, in Sections 12, 13 and 24, by the Red Deer River and its banks. The river was crossed in Section 13. The line crosses creeks in Sections 1, 12 and 24, and a small lake in 36.—*C. F. Miles, 1883.*

Sub-division.—Gently-rolling prairie. Soil, sandy loam, of 8 to 12 inches deep, on a subsoil of clay loam. Class 2. The Red Deer River runs south-east from Section 33, and courses over 34, 27, 26, 23, 24 and 13. The valley of the river consists of flats,

which have a rich soil, and extend inland, on either side, for from one-half to three-quarters of a mile, where they are met by clay banks, having an elevation of 80 to 120 feet.—*J. J. Burrows*, 1883.

- 27. Outlines.**—West, rolling prairie, except Sections 30 and 31, which are hilly. The Red Deer River crosses in Section 18. Here, also, is a deep coulée, with cut banks.—*T. R. Hewson*, 1883.

East, rolling prairie. A large pond in Section 12, a creek in 13, and an old trail in 25.—*C. F. Miles*, 1882.

South, the Red Deer River was crossed in Section 4, and 3 and 4 are broken by the valley of the river. Deep ravines were crossed in Sections 5 and 6.—*J. J. Burrows*, 1883.

- 28. Outlines.**—Very hilly prairie; rather high, and intersected in the valleys with small streams, which dry up as the season advances. Soil, generally clay loam. Class 2.—*T. Fawcett*, 1883.

West, the country along this line is hilly. Creeks cross the line in Sections 18 and 19. *T. R. Hewson*, 1883.

East, undulating and rolling prairie. Sections 12 and 13 are partly covered by a large lake. In Sections 24, 25 and 36 creeks cross the line.—*C. F. Miles*, 1883.

- 29. Outlines.**—West, rolling and hilly prairie. Creeks, flowing in a south-westerly direction, cross the line in Sections 19, 30 and 31.—*J. K. McLean*, 1884.

As seen from its east boundary, forms part of the Hand Hills, and is occupied by one of the large hilly plateaus. The soil is a rich black loam, with clay subsoil, and is very suitable for all kinds of farming purposes. There are belts of large timber in this range, in the gullies, on the north side of the hills, both in this township and in Township 30. Water appears to be scarce.—*P. R. A. Belanger*, 1883.

The extreme south of this township consists of very hilly prairie, and is intersected in the valleys by small running streams, which very soon dry up. The soil is generally a clay loam.—*T. Fawcett*, 1883.

- 30. Outlines.**—Rolling prairie in the west, and broken and hilly in the east. In Sections 7, 19, 30 and 24 the boundaries cross creeks, and a couple of clear-water ponds in 36.—*J. K. McLean*, 1884.

- 31. Outlines.**—Rolling prairie, with the exception of Section 1, which is broken by low hills. A pond was crossed in Section 12, and a creek in 36. Clay loam soil; clay subsoil, class 2.—*J. K. McLean*, 1884.

- 32. Outlines.**—North, good, rolling prairie land. The line crosses a marsh in Section 34.—*E. Bray*, 1883.

Rolling prairie. Two small creeks, which, at the time of survey (2nd September), were merely a succession of pools, cross the township. Clay loam soil; clay subsoil. Class 2.—*J. K. McLean*, 1884.

- 33. Outlines.**—A shallow, muddy lake extends across the north end of this township, entering from the east from Section 25 to 31. South of this lake, rolling prairie, with a sandy loam soil, chang-

ing to clay loam towards the west ; clay and sand subsoil. Class 2.—*J. K. McLean*, 1884.

34. *Outlines.*—Except the row of sections along the north end, and the four south-east ones, this is a hilly township. Clay loam soil ; clay subsoil ; class 2. West, the south half of Section 6, with the exception of a sand flat in the northern part, is covered with water, and water exists in nearly every section.—*J. K. McLean*, 1884.

35. *Outlines.*—Rolling prairie ; clay loam soil ; clay subsoil ; class 2. Occasional bluffs of poplar, from 4 to 6 inches in diameter, mixed with poplar and willow scrub, appear on the north-western Sections. A large lake, containing muddy water, lies on the township westwards, and extends along the line, crossing in Sections 19 and 31. Water is abundant everywhere.—*J. K. McLean*, 1884.

36. *Outlines.*—North, undulating prairie, and level. A few grass swamps are met. Soil, generally first class.—*T. Kains*, 1883.

The south-western sections are taken up by the north-east bay of a lake of considerable size. The remaining sections are undulating prairie. Clay loam soil ; clay subsoil ; class 2.—*J. K. McLean*, 1884.

37. *Outlines.*—Is somewhat cut up by clay lakes, which resemble mud puddles on a large scale. Some of these lakes cover as much as 3,000 or 4,000 acres. The alluvial soil appears to have either been burnt off by repeated fires, or washed off the surface of the lands in the immediate vicinity of these lakes, leaving nothing but the bare, stiff clay subsoil, with but scant vegetation. This township is gently-undulating, and, except around the lakes, may be classed as No. 1, but very dry. Soil, sandy loam, with clay subsoil.—*C. F. Miles*, 1884.

38. *Outlines.*—Undulating prairie, with a few scattered bluffs of small poplar and willows. The soil is principally a clay loam, with a clay subsoil, and first class. Big Knife Creek, formed into deep ponds by numerous beaver dams, meanders north-westerly through the north-east corner. At the time of survey, in September, there was no perceptible current in the creek, and the water was very muddy, on account of the workings of the beaver.—*C. F. Miles*, 1884.

39. *Outlines.*—Nearly all open, undulating prairie, with Big Knife Creek running across it from south to north, thereafter emptying into Battle River. Small tributaries of Paint Earth Creek run north-easterly across the east boundary. The trail from Edmonton to the Forks of the Red Deer River crosses the township diagonally. About the centre of the east half the trail runs through a grove of poplar bluffs. The soil, generally, is a black sandy loam, and first class.—*C. F. Miles*, 1884.

40. *Outlines.*—North, rolling, and partially covered with bluffs of poplar and willow scrub. The line crosses a ravine bearing east to Battle River. A small creek flows through the ravine, and along its sides some excellent spruce. Soil, first class.—*C. A. Magrath*, 1883.

Undulating prairie, with poplar bluffs and willows on the north-west half; nearly open prairie on the south-west half. Red Willow and Big Knife Creeks meander north-easterly, the former within high banks, cut in many places. Some good spruce grows along the banks of these creeks. Soil, black sandy loam with clay subsoil. There are numerous ponds and lakelets in the north-east corner. The trail from Edmonton to the Forks of the Red Deer River runs diagonally through the south-west quarter.—*C. F. Miles*, 1884.

41. *Outlines*.—Rolling land, much broken by Battle River Valley, which crosses from Sections 35 and 36 to Sections 13 and 24, and also by creeks and ravines, draining into it. The surface is generally wooded with poplar, and in the valley is some fair spruce. In places the soil is good, but on account of its unevenness would only average class 2.—*L. R. Ord*, 1883.

South, as appeared from the southern boundary, the surface is rolling, with bluffs of poplar and willow scrub. Cut Knife Creek crosses about Section 4, in a ravine along which there is some excellent spruce. The soil is first class.—*C. A. Magrath*, 1883.

Sub-division.—Is badly broken by Battle River, the two branches of Meeting Creek, and several small lakes and ponds. The river is very crooked, and flows through a valley about three-quarters of a mile wide, and about 140 feet below the table land. The soil in the valleys is very inferior, being a hard white clay, impervious to water, all rain running directly into the river, causing it to rise rapidly. The table land is of good quality—black loam, from 6 to 12 inches deep, and clay subsoil. There is plenty of poplar for fuel and fencing. On Sections 9 and 10, in the valley of the south branch of Meeting Creek, is some good spruce and fair sized poplar, fit for building purposes. The river, creeks, lakes and ponds supply a good quality of fresh water.—*W. Crawford*, 1884.

42. *Outlines*.—Much broken, and east of Battle River, comparatively valueless; to the west, it is a good deal cut by coulées. The soil is fair in places, but the subsoil in most of the township is either gravel or a hard clay, that, from some cause—probably excessive drouth—has solidified nodules or concretions, becoming almost a clay stone, and too tough to be broken with a spade. The average is below class 2.—*L. R. Ord*, 1883.

Sub-division.—Battle River flows from Section 33 to Section 2, through a valley nearly a mile wide. Those sections adjoining the river valley are badly broken by ravines and are only fit for grazing purposes. The top soil on the table land is fair, but the subsoil is inferior, being a very hard clay. There is no timber of any value, except for fuel and fencing. The water in the ponds and sloughs is fresh and good.—*W. Crawford*, 1884.

43. *Outlines*.—Rolling prairie; nearly all open, with occasional bluffs of small poplar and stretches of brush. It is not so wet as the township to northward, but it contains a good many ponds. The land towards the southern sections, deteriorates in value, and is

cut by numerous coulées and ravines, discharging into Battle River valley, which crosses the south-west corner. The average is class 2.—*L. R. Ord*, 1883.

Sub-division.—The south-westerly portion is broken by Battle River valley and ravines. The soil on the north side of the river is a black loam, and the subsoil on the greater portion is hard clay. There is no timber of any value, except for fuel and fencing. The river and ponds furnish an abundant supply of fresh water. The land in the valley of the river is very inferior and unfit for settlement. On the table land it is fairly well adapted for agricultural and grazing purposes.—*W. Crawford*, 1884.

44. *Outlines*.—North, generally level, with numerous ponds and swamps, bordered by willows, while scattered poplar bluffs of small sized timber, are met with frequently. The soil is first quality.—*T. Kains*, 1883.

Rolling prairie; scattered bluffs of small poplar, and strips covered with brush. Towards the northern line the land is low and somewhat wet, and dotted with numerous ponds and marshes, but southwards it improves. The soil is well adapted for settlement, being a rich sandy loam, averaging 12 inches deep, with a clay and clay loam subsoil, and nearly all ranking class 1.—*L. R. Ord*, 1883.

45. *Outlines*.—West and east, slightly undulating, with many ponds and swamps and bluffs of poplar and willows. Soil, first class.—*J. J. McArthur*, 1883.

South, generally level, and has a first class soil. Numerous ponds and swamps. Bluffs of small poplar dot the country.—*T. Kains*, 1883.

Sub-division.—Much of it is low and swampy; on the western side it is drier and rolling. The eastern boundary of Sections 25 and 36 is broken by the western side of a large lake extending into Range 16. Much of the township is covered with bush. The soil in places is good; but much of it, especially in the high places, is stony and hard.—*W. Beatty*, 1883.

46. *Outlines*.—West and east, slightly undulating, with many swamps and patches of poplar and willows. Soil, first class.—*J. J. McArthur*, 1883.

Sub-division.—The western portion of this township is generally dry and nearly level, and has growing patches of willow and poplar. The eastern portion is generally rolling, with large stretches of bush, willow, and, in parts, burnt willow. There is much surface water towards the eastern portion, with flats of excellent hay land. A large marshy lake lies on the east boundary, and extends into Range 16. Soil, generally, class 2.—*W. Beatty*, 1883.

47. *Outlines*.—Slightly undulating, with many ponds and swamps, and scattered with bluffs of poplar and willows. Soil, first class.—*J. J. McArthur*, 1883.

- 48. Outlines.** North, good prairie, with scrub and bush. Numerous marshes. In Section 36 a cart trail crosses the line.—*C. A. Magrath*, 1883.

Soil, first class. Similar to Township 47.—*J. J. McArthur*, 1883.

- 49. Outlines.**—Undulating country, interspersed with numerous grass swamps, thick clumps of willows and poplar bluffs of small sized timber. The soil is a rich clay or sand loam, having, for a subsoil, clay or sand, and rated first class.—*T. Kains*, 1884.

- 50. Outlines.**—Almost level country, with scattered bluffs of small poplar and clumps of small thick willows. Timber is very small, and unfit for buildings of any kind. Hay swamps are numerous and the soil first class. This township is well adapted for farming purposes, and contains some choice sections.—*T. Kains*, 1884.

- 51. Outlines.**—Beaver Lake submerges the west of this township, and the country along the east is scrubby, with numerous lakes and ponds.—*M. Deane*, 1883.

- 52. Outlines.**—North, prairie; scattered willows and numerous marshes. The trail from the settlement to Victoria was crossed in Section 35; and that from Fort Saskatchewan to the settlement in 33. In the west half of 32 the line enters Beaver Lake. This lake extends over the whole of Section 31, and part of 32.—*C. A. Magrath*, and *G. A. Simpson*, 1883.

East, scrubby prairie, with a little bush. Ponds and marshes are numerous.—*M. Deane*, 1883.

- 53. Outlines.**—West, Beaver Lake covers the greater part of Section 6. A large marsh and Beaver Creek in Section 7. North of this, small scrub and willow bluffs.—*G. A. Simpson*, 1883.

Rolling country, containing poplar bluffs, willow clumps, and numerous ponds and swamps. Soil, first class and well adapted for farming purposes.—*T. Kains*, 1884.

- 54. Outlines.**—Undulating country, containing poplar bluffs and willow clumps with a fair sprinkling of ponds and swamps. Some of the poplar timber is of fair size, and would be found useful for building purposes. Soil, first class. A cart trail from Beaver Lake to Victoria passes through this township.—*T. Kains*, 1884.

- 55. Outlines.**—Rolling country, more or less heavily timbered with poplar and willow, and occasional clumps of spruce. Pretty well cut up by creeks, the waters of which find their way into Egg Lake to the north-east. Soil, second class.—*T. Kains*, 1884.

- 56. Outlines.**—Undulating country, heavily timbered on east side of range. Rest of township fully one-half covered with thick willows and poplar bluffs. Numerous ponds and swamps. Soil, good, classes 1 and 2.—*T. Kains*, 1884.

Along the north boundary, the surface is quite flat and wet.—*G. B. Abrey*, 1883.

- 57. Outlines.**—West, low and swampy. Spruce, tamarac, poplar and high willows. Numerous sandhills.—*D. Beatty*, 1882-83.

Flat country, and pretty generally heavily timbered with poplar, willow and spruce. Numerous muskegs, ponds and swamps. Soil, second class.—*T. Kains, 1884.*

Outlines.—The River Saskatchewan runs through the southern portion. South of the river is dense bush, interspersed with muskegs. Poplar and clumps of spruce, with thick willows, cover almost the whole surface. The country north of the river is dense bush, consisting of small poplar and willows, with the exception of a narrow belt at the immediate north side of the river, through which the Edmonton and Battleford trail is located. The village of Victoria is situated on Sections 11, 13 and 14, and a grist mill is located on Smoky Lake Creek which runs into the Saskatchewan near the east boundary of the range. Soil, second class. Settlers claims extend along the north side of the river the whole width of the township.—*T. Kains, 1884.*

59. *Outlines.*—Is undulating, with an occasional ridge of small hills. Is wooded, chiefly with 3 to 7-inch poplar and high, grey willows, also small clumps or belts of spruce. White Earth River passing through Section 36 drains the north-eastern portion, while a creek, rising in Smoky Lake and flowing south-east, drains its southern and western portions. There are numerous small lakes. The soil varies greatly. In the east a clay subsoil is overlaid in some cases by from 3 to 10 inches of black loam, in others by about 5 inches of a dark sandy loam. Towards the west the soil becomes heavier, consisting of about 5 inches of clay loam over a stiff clay subsoil. This township is not well suited, generally, for agricultural purposes.—*C. A. Magrath, 1884.*

60. *Outlines.*—The north and north-eastern portions are hilly; the eastern and central portions rolling, and the western portion undulating. There are several ranges of hills of considerable size. The White Earth River crosses south-east from Section 7. The valley of this river, which is bordered by hills over 100 feet high, is about one mile wide. On the north side of the river the valley consists chiefly of muskeg, wooded with 4 to 8-inch tamarac. To the south the country along the valley is more open, with a good soil, and otherwise suited for agriculture. There is a pack trail along the south side of this river. A cart trail crosses the north boundary in Section 32, and the west boundary in Section 1; from thence it follows along the north side of the White Earth River and joins the Victoria and Saddle Lake trail. There are numerous small lakes in the north surrounded by muskegs, with tamarac timber, and drained by small creeks. The township is wooded, for the most part, with 4 to 8-inch poplar, and a dense growth of 1 to 4 inch poplar. The hills and knolls are densely timbered with 5 to 15-inch pitch pine, while there is considerable 5 to 12-inch spruce scattered throughout. The alluvial soil consists of about 5 inches of a black sandy loam; this is underlaid by sand.—*C. A. Magrath, 1884.*

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TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XVIII.

5. *Outlines.*—Rolling prairie. Soil, in the west, sandy loam, with clay subsoil, gravelly in many places. In the east gravelly clay, with clay subsoil. In Sections 1 and 12 the line runs along the bottom of a coulée, and in 24 crosses a long fresh water lake, which is about half a mile wide.—*C. E. Wolff*, 1884.

South, undulating prairie, with a fair soil.—*O. J. Klotz*, 1883.

6. *Outlines.*—Rolling prairie. Soil, westwards, sandy loam; eastwards, gravelly clay, both on clay subsoil. Surface stones in Section 1. In Section 25, a creek crosses the line three times. Surface water scarce.—*C. E. Wolff*, 1884.

7. *Outlines.*—Surface, undulating. Soil, sandy loam mixed with gravel. The grass is poor. In the south-half of Section 6 is a watercourse; but the country is very dry, only one small marsh being crossed in Section 13.—*C. E. Wolff*, 1884.

8. *Outlines.*—Undulating and rolling prairie. Soil, sandy loam, mixed with gravel and small boulders. From Section 6 the Walsh and McLeod trail crosses the township. In Sections 24 and 25 a large alkaline lake was crossed in Chin Coulée. Water scarce.—*C. E. Wolff*, 1884.

9. *Outlines.*—Is very dry, rolling land, broken only by a large slough in Chin Coulée. The soil is very light, sand loam; growth of grass, short. The trail to Medicine Hat was crossed, and there is a large marsh between Sections 25 and 36.—*F. W. Armstrong*, 1883.

South, good undulating prairie, covered with good grass and flowering vetches. Chin Coulée Valley is about half a mile wide, and the banks about 50 feet high. In it are a succession of pools and lakes of alkaline water.—*O. J. Klotz*, 1883.

Sub-division.—The soil is class 2, and composed of a sandy loam, of from 1 to 3 feet, on a substratum of clay. The north two-thirds is gently-undulating, but, upon approaching the south boundary, the surface becomes rolling, with a slight mixture of gravel on the tops of the ridges. A few rapidly disappearing ponds may be found at this time (May, June) of the year. The grass is of very good quality.—*C. A. Bigger*, 1884.

10. *Outlines.*—Along the north boundary it is an open-gently rolling prairie, except in Section 31, which is very broken and hilly, being the north bank of the Belly River. This river flows from Section 31 across the township to Section 24, from which it passes to the next range. The country on both sides of the river is much broken by gullies. The soil northwards is sandy and sandy loam, on a sandy loam subsoil. Classes 1 and 2.—*A. Bourgeault*, 1883.

West and east is a dry rolling prairie. Soil, very light. Belly River runs through the northern portion. Some timber along the river.—*F. W. Armstrong*, 1883.

Sub-division.—The greater part of this township is a good sandy loam, and generally second class. Belly River, with its high banks and numerous coulées, flowing through the north part of this township, is the cause of a great deal of waste land. There were a few fresh-water ponds at the time of survey (May-June). Two or three small groves of cotton-wood are growing on the river bottoms. There is abundance of coal of a good quality in this township.—*C. A. Bigger*, 1884.

- 11. Outlines.**—North, undulating prairie. The soil is a light sandy loam. No water.—*L. Gosselin*, 1883.

West and east is a very dry, rolling prairie. Soil, sandy and gravelly.—*F. W. Armstrong*, 1883.

Sub-division.—With the exception of Sections 5 and 6, the land in this township is very even and unbroken. The surface is undulating and the soil a light sandy loam, supporting a fair growth of grass. In ordinary seasons this township would be very dry and almost worthless. Belly River touches the township at the south-west angle (Section 6).—*C. A. Bigger*, 1884.

- 12. Outlines.**—North, the country is partly hilly and partly rolling. Soil, sandy loam, and in some places a whitish clay loam.—*C. A. Magrath*, 1882.

West and east is a dry, rolling prairie. Soil, sandy and stony. No timber.—*F. W. Armstrong*, 1883.

Sub-division.—Mostly rolling prairie. Soil, a good clay loam, subsoil of clay, and class 1. Towards the close of summer all the surface water in this township has completely evaporated, and water is only to be had by digging. The township, under a favorable rainfall, however, with its good soil, ought to produce good crops.—*L. Gosselin*, 1883.

- 13. Outlines.**—North, west and east, undulating or gently-rolling prairie. First class, good, sandy loam, with gray clay subsoil; abundance of grass; water very scarce.—*P. R. A. Belanger*, 1882.

Sub-division.—Either rolling or hilly. Soil generally class 1 for agricultural purposes, being a sandy loam, a little stony, sandy and gravelly in a few places. Surface water is scarce, and there is no wood.—*J. W. D'Amours*, 1883.

- 14. Outlines.**—Surveyed all the boundaries, gently-rolling prairie. First class sandy loam soil, with a kind of grey clay subsoil. Water scarce; but vegetation abundant.—*P. R. A. Belanger*, 1882.

Sub-division.—Nicely rolling or undulating. The soil is composed mostly of a good sandy loam, but is inclined to dryness. There is no surface water and no wood.—*J. W. D'Amours*, 1883.

- 15. Outlines.**—Undulating or gently-rolling prairie of first-class sandy loam, with a clay subsoil, covered with abundance of grass. In this township are small pools of fresh water.—*P. R. A. Belanger*, 1882.

Sub-division.—Dry rolling prairie. Soil, a sandy, and in places, gravelly loam on sandy clay and gravelly subsoils—gen-

erally good soil, although a little stony in some places. No wood, and surface water scarce.—*J. W. D'Amours*, 1883.

- 16. Outlines.**—North is undulating dry prairie, with good vegetation.—*O. J. Klotz*, 1882

Undulating prairie. Soil, first-class sandy loam, covered with abundance of grass. Water is scarce.—*P. R. A. Belanger*, 1882

Sub-division.—Is open, dry, rolling prairie. Soil is pretty good, being a good loam or clay. In the north-west corner is a small lake.—*J. W. D'Amours*, 1883.

- 17. Outlines.**—Dry, undulating prairie, with scant vegetation. Principally clay soil; in many places with gravelly subsoil and gravelly elevations. The Bow River and a creek cross Section 36, and both this Section and 25 are broken prairie.—*C. F. Miles*, 1883.

Sub-division.—Undulating. Soil, clay and clay loam—class 2—on clay subsoil. The Bow River crosses the north-east corner. The right bank is high and abrupt, and broken by deep coulees; the left bank is flanked by a flat valley, half a mile wide, with good grass, but gravelly soil. There are a few marshes in the township, and it is well suited for cultivation. The river is clear and pure, with a depth of 7 feet and a current of 3 miles.—*G. Ross*, 1883.

- 18. Outlines.**—Undulating prairie. There are some grassy marshes and good vegetation in the depressions. The north-west corner is rolling and hilly. The Bow River meanders southerly through the east half, which consists principally of undulating prairie.—*C. F. Miles*, 1883.

Sub-division.—The north-western part of the township is broken by the Rocky Buttes prairie, rounded hills and ridges, 30 to 60 feet high, stony in places, but generally having good clay soil and a good growth of grass, making very desirable pasture lands. The remainder of the township is undulating prairie, with clay soil and well suited for agriculture, excepting the portion broken by the Bow River, which flows through the eastern part, in a southerly direction. The banks of the river are high and abrupt on the one side and close to the river, and on the opposite side are flanked by an intervening valley or flat of half a mile wide. This feature changes sides during the course of the river, according to the bend or direction of the current. The water is clear and pure, 7 or 8 feet deep, and moves with a current of three or four miles over a gravelly bottom. The balance of the township is well suited for farming, being undulating and having a clay soil.—*G. Ross*, 1883.

- 19. Outlines.**—The Bow River, flowing southerly and easterly through this township, divides it into nearly two halves. The northerly half consists of rolling and undulating prairie, with some good flats along the river for grazing. The south-east quarter, west of the river, is very hilly, being in Stony Buttes, with the Bow River winding around them on the north and east sides, forming high broken, and cut banks. The Stony Buttes are the two highest elevations among these hills, from the summit of which the Sweet

Grass Hills, at the International Boundary, can be seen on a clear day.—*C. F. Miles*, 1883.

Sub-division.—Bow River enters by Section 31, courses south to 30, east to 24, and finally south to 2, thus taking a circuitous south-east route across the township. The banks of the river range from 200 to 400 feet high, and the descriptive features of the river valley and banks are similar to those in Township 18 of this range. The portion of the township, north of the river—except in its immediate vicinity—is undulating prairie, with clay soil and well suited for farming. South and east of the river is hilly prairie with excellent clay soil, but better suited for grazing.—*G. Ross*, 1883.

- 20. Outlines**.—North, the land is made up of third and fourth classes, and averages third class.—*T. Drummond*, 1882.

West and east, principally rolling prairie. Soil, mostly sandy loam. Rate second class. The Canadian Pacific Railway runs through Section 36.—*C. F. Miles*, 1883.

Sub-division.—Rolling prairie, with a black sandy loam, soil of from five to ten inches deep, upon a clay and sandy subsoil, good enough for agriculture, but water is rather scarce and the grass throughout is of an inferior quality. Section 6 is broken by the Bow River. There is no wood in this township. The Canadian Pacific Railway crosses near the north-east corner.—*E. Boivin*, 1884.

- 21. Outlines**.—This township is generally undulating prairie, and sandy and clay loam, with clay subsoil. Principally first class. The west is undulating and stony, and water is not plentiful, though some was seen. In the east, Section 36 is hilly, and the northern part of Section 1 has small sandhills, while boulders occur in the north of 24 and in 25.—*C. F. Miles*, 1882.

Sub-division.—The C.P.R. crosses the township. Mostly rolling, except from Section 12 north to the chord, which is hilly. Water is scarce, there being only one large slough of fresh water. Good water can also be obtained in the Bow River, near the south-west corner of the township. The soil is principally a clay and yellow loam, except in the hilly part named, where it is a sandy and gravelly loam. No timber. This township is very well adapted for settlement and agricultural purposes, being class 2, the only drawback being a lack of moisture.—*G. E. MacMartin*, 1883.

- 22. Outlines**.—North, hilly and rolling prairie. The alluvial soil is 4 inches deep, resting on a clay subsoil. Water is scarce.—*A. W. McVittie*, 1882.

Rolling prairie, with some stones. Soil, a clay loam, generally first-class, but water scarce. Sections 1, 12, 13 and 24 have stones and gravelly knolls. In 24 and 25 is a large alkaline slough, dry in summer.—*C. F. Miles*, 1882.

Sub-division —High-rolling and hilly, particularly the eastern portion, which is situated high and dry, and class 3. The southern and western portions are rolling, and less hilly. There are numerous sloughs, but many dry up after mid-summer, rendering

surface water scarce. There is an alkali lake in Sections 23 and 24. The soil in the eastern portion is mostly gravelly, with a sparse vegetation. The southern and western portions are clay and yellow loams, class 2. No timber. This township is better suited for grazing than farming.—*G. E. MacMartin*, 1883.

- 23.** *Outlines.*—West, east and south, rough and hilly prairie, with numerous sloughs, many of them dry, especially in the south. The soil is clay, with a little surface gravel and field stone. The township ranks as third class.—*A. W. McVittie*, 1882.

Sub-division—High-rolling and hilly, with numerous fresh-water sloughs, many of which dry as the season advances. The soil is composed of yellow clay and gravelly loams. Class 2. No timber and no minerals. This township is suitable for farming or grazing, for although the surface is classed as hilly, still these elevations are small, and not a serious bar to cultivation. It is a fair township on the whole.—*G. E. MacMartin*, 1883.

- 24.** *Outlines.*—North, surface very rough. Soil, generally a gravelly loam, from 10 to 15 inches deep; subsoil, gravelly clay.—*W. Ogilvie*, 1882.

On the west, Sections 6 and 7 are rolling, and 18, 19, 30 and 31 are very hilly. The east is all hilly prairie. Throughout there are numerous sloughs, many of them dry. The soil is clay, and ranks as third class.—*A. W. McVittie*, 1882.

Sub-division.—Principally rolling prairie, except a small portion along the eastern boundary, which is hilly. The hills are small and fresh-water sloughs numerous. Water, generally, is plentiful, and is good and deep in the sloughs. A fresh lake lies in Section 31. The soil is yellow and clay loam, class 2, with some sections of class 1. The township is very well suited for farming or grazing, and may be divided thus: four southerly tiers of sections for farming, and the remainder, northwards, for grazing. *G. E. MacMartin*, 1883.

- 25.** *Outlines.*—North and west, dry and rolling prairie.—*J. J. Burrows*, 1883.

East, hilly country. No water, except in a large fresh lake on Sections 24 and 25. Soil, very heavy, dry clay.—*T. R. Hewson*, 1883.

South, rough. Soil, a gravelly loam; subsoil, gravelly clay.—*W. Ogilvie*, 1882.

Sub-division.—The northern and southern tiers of sections are of a heavy-rolling character, and the remainder of the township is undulating. The soil is a sandy loam, of 6 to 9 inches deep, resting on a subsoil of gravelly clay in the first-named portions, and on pure clay in the second division of the township. Class 2. Two fresh-water lakes lie within the township. Sa-oo Lake breaks on Sections 13, 14, 23, 24 and 25, and Mat-to-ye-kue Lake on 8, 9, 10, 15, 16 and 17.—*J. J. Burrows*, 1883.

- 26.** *Outlines.*—West, Sections 6 and 7 are rolling; the remaining four are hilly. The northern part of Section 19 and the southern part of 30 are scrubby. A small creek in 19. East, very hilly and

rolling. Without water. Soil, generally a very heavy, dry clay.
—*T. R. Hewson*, 1883.

Sub-division.—Heavy-rolling prairie, except the northern tier of sections, which are hilly, and on the slopes of which there are small bluffs of willow and poplar scrub. Good fresh water is abundant, and at the base of the elevations or small hills springs of excellent water are found. A small creek flows through Sections 1, 2, 9, 10 and 11. This township is well adapted either for agricultural purposes or stock-raising, having a deep sandy loam soil, covered with a rich and heavy growth of grass.—*J. J. Burrows*, 1883.

27. *Outlines*.—Rolling country; third class in character. Very much cut up by deep coulées running towards the Red Deer River, which crosses the east boundary of Section 13; very slow current. Some small poplar along the banks of the river and the coulées.
—*T. R. Hewson*, 1883.

28. *Outlines*.—Very hilly prairie northwards. The hills intersected by small spring streams. Soil, clay loam, generally class 1; rich pasture land. Seams of coal, 6 feet thick, crop out along the banks in Section 35.—*T. Fawcett*, 1883.

Hilly country, very much cut up by ravines, except the extreme north-west, which is rolling. Soil, clay loam, with clay subsoil. In the south-west the Red Deer River was crossed, and creeks cross the line in Sections 13 and 24.—*T. R. Hewson*, 1883.

29. *Outlines*.—Broken by ravines, some of which contain small creeks on each side. Rolling prairie in the centre. Sand and clay loam soil, with clay subsoil. Classes 2 and 3.—*J. K. McLean*, 1884.

The southern part of this township is on the southern slope of the Hand Hills, and consists of many ravines trending to Willow Creek, which renders it very hilly and uneven. There are many small spring streams in the sides of the hills. The soil is a clay loam, and generally class 1, with rich vegetation.—*T. Fawcett*, 1883.

30. *Outlines*.—Rolling prairie. Several small creeks running into Red Deer River cross this township. The creeks actually crossed were in Sections 7, 19, 12, 24 and 25. Clay loam soil; clay subsoil. Class 2.—*J. K. McLean*, 1884.

31. *Outlines*.—Rolling prairie. Clay loam soil; clay subsoil. Classes 2 and 3. A creek in Section 19, and a few ponds elsewhere; but water rather scarce.—*J. K. McLean*, 1884.

32. *Outlines*.—North, good rolling land. A cart trail in Section 34.—*E. Bray*, 1883.

Rolling prairie. A few ponds occur, and a small creek crosses the southern sections. Clay loam soil; clay subsoil.—*J. K. McLean*, 1884.

33. *Outlines*.—The north-west quarter is very hilly, with a heavy fringe of willow around the numerous ponds. Class 3. The remainder is rolling prairie. Sand and clay loam soil, clay subsoil. Class 2.—*J. K. McLean*, 1884.

34. Outlines.—The sections along the north boundary are rolling prairie. Class 2. The remainder is very hilly, with willow scrub around the sloughs. Sand and clay loam soil; clay subsoil. Class 3. A large lake was crossed in Sections 30 and 31, the greater part of 31 being under water. In the east numerous clear water ponds were crossed, and Section 1, with the exception of a sand flat in the northern part, is covered with water.—*J. K. McLean*, 1884.

35. Outlines.—A large shallow lake occupies the east half, A range of hills, about two miles in width, runs through the centre of the west half, with rolling prairie north and south. Sand loam soil; clay subsoil. Classes 2 and 3.—*J. K. McLean*, 1884.

36. Outlines.—North, undulating to rolling prairie, with scattered bluffs of poplar near the north centre. Soil, clay or sand loam, with clay subsoil. Rated first class.—*T. Kains*, 1883.

Several of the south-east sections are taken up by a portion of a muddy lake. The remainder is rolling and undulating prairie, the sloughs and ponds towards the west being heavily fringed with willow scrub. Sand and clay loam soil; clay subsoil. Class 2.—*J. K. McLean*, 1884.

37. Outlines.—The southerly half is principally open prairie, with a few scattered bluffs of second growth poplar and clumps of willows. Is undulating, and may be rated as second class—whereas the northerly half, which is covered by numerous bluffs of poplar, may be rated as first class—the soil amongst the bluffs being a rich black sandy loam. This township is somewhat cut up by muddy, shallow lakes, with clay banks and beds. In the immediate vicinity of these lakes the land is more or less devoid of vegetation—consisting of a clay, with white clay subsoil.—*C. F. Miles*, 1884.

38. Outlines.—This is a superior township, consisting of undulating prairie, with few scattered poplar and willow bluffs. Soil, clay loam, and clay subsoil. First class.—*C. F. Miles*, 1884.

39. Outlines.—Consists of undulating prairie, with a few scattered bluffs of willows and small poplars. Red Willow Creek runs north-easterly through the north half. Soil, black sandy loam, with generally a clay subsoil. First class.—*C. F. Miles*, 1884.

40. Outlines.—North, the country is open and rolling. Soil, first class.—*C. A. Magrath*, 1883.

The north-west corner is high-rolling, and somewhat hilly prairie, broken by numerous ponds fringed with high grey willows and some poplar. The remainder is more undulating, with ponds, lakelets and poplar bluffs in the north half, which thin out toward the south. Red Willow Creek runs easterly along the south-east corner, and then crosses and re-crosses the east boundary, leaving this township in Section 24. The trail from Edmonton to the Forks of the Red Deer river runs through the east half, leaving at Section 13, near where the trail crosses the Red Willow Creek. On the north escarpment of the banks of the creeks, just above the water's edge, there is visible a coal seam, which has

been smouldering for years, and which, at times, fanned by a southerly wind, emits dense volumes of smoke. A few spruce along the banks of the creek.—*C. F. Miles*, 1884.

41. Outlines.—Generally open, rolling land, with scattered bluffs, mostly fire-killed, brush, and numerous lakelets and ponds. The north-east corner of the township is broken by the valley of Meeting Creek, which traverses it, flowing east in a valley a mile wide and some 200 feet deep, open on the flat, but wooded on the southern hill. The soil is a sandy loam, very rich in quality, and 10 to 18 inches deep, with clay and clay loam subsoil, and very rich vegetation.—*L. R. Ord*, 1883.

42. Outlines.—Rolling land, open in the east, but covered with brush in the western part. Meeting Creek crosses from Section 19 to Section 3 in a valley which deepens to the south-east in banks of clay, ironstone and a friable sandstone. Traces of carbonaceous shale are visible at the foot of some of the hills, but no coal. The soil, in places, is good, but would not average above second class. In Section 19 there is a cart trail. The valley of the creek is very wide, extending from two to two and a-half miles. Sloughs are numerous.—*L. R. Ord*, 1883.

43. Outlines.—Rolling prairie, with bluffs of poplar and willow. Battle River traverses the township from Section 32 to Section 13, and the surface is somewhat cut by ravines draining into it. Here it is a swift stream, about 1 chain wide, and makes its way through cut clay banks, at the bottom of a valley rather over a mile wide. At the river's edge, and about 100 feet below the plains, there crops out, here and there, a seam of coal about 4 feet thick.—*L. R. Ord*, 1883.

Sub-division.—Is nearly all covered with poplar and willow scrub. The soil is a black loam, from 6 to 10 inches deep, on the south side of the river, with a clay subsoil. On the north side the soil is a light loam, and the subsoil hard clay. Battle River flows from Section 32 to Section 13. The valley, on an average, is over three-quarters of a mile wide, and the soil very poor. The south bank of the river valley is nearly all covered with small poplar, of no value except for fuel and fencing. There is an abundant supply of good fresh water. The table land on the south side of the river is fairly well adapted for settlement.—*W. Crawford*, 1884.

44. Outlines.—North, Sections 31, 32 and 33 are hilly. After this hilly part is a more open country, dotted with a few scattered poplar bluffs and numerous ponds and swamps, the latter fringed with willows. There is a large marsh, terminating to the south in a creek, and flowing south-west to Battle River, in Section 36. First class land.—*T. Kains*, 1883.

Rolling prairie, with bluffs of willow and small poplar. The township is excellent for agricultural purposes, the surface being gently-rolling, with occasional ponds, and the soil a rich sandy loam, averaging 10 inches deep, with clay loam subsoil.—*L. R. Ord*, 1883.

Sub-division.—Undulating prairie, dotted with small poplars and willows, which form into larger bluffs towards the north and west. In the south are many sloughs—some of them large. The soil is well fitted for farming, being composed of a rich fertile sandy loam, 12 inches deep, on a sandy subsoil. The vegetation is luxuriant. Alkaline matter lies here and there on the margin of the Battle River. This river enters the township on the west side of Section 6 and flows through Sections 6 and 5 in a south-east direction. The scenery along the north bank of the river is varied and beautiful. Water, generally, is good.—*H. Kerr, 1884.*

- 45.** *Outlines.*—Dried Meat Creek takes its rise in a marsh situated in the north-east, and then flows east. In the south-east corner is another large marsh, connected with this creek by a slough. Along the south boundary the land is undulating, with many ponds, and bluffs of poplar. The remainder is overgrown by willows, with many small swamps. Soil, first class.—*J. J. McArthur, 1883.*

South, Sections 1, 2 and 3 are in a fairly open country, having some small poplar and numerous ponds and swamps. A large marsh, in Section 1, extends into the township south of this. Sections 4, 5 and 6, in the vicinity of the southern boundary, are hilly; but this does not seem to reach any great distance to the north, as beautiful undulating country was noticed from the tops of some of the knolls. The land is first class.—*T. Kains, 1883.*

Sub-division.—Contains much fair and good land—class 2—especially towards the south and east, where the surface is rolling. The north-western part is much broken by swamps and marshy lakes. Some fine stretches of country are found near a small stream, which sinks in places, and runs through the township, connecting a line of ponds and swamps. Small scrub willow, brush and poplars constitute the prevailing growth of wood.—*W. Beatty, 1883.*

- 46.** *Outlines.*—East and west, slightly-undulating, with many swamps. There are poplar bluffs scattered throughout, and interspersed with patches of willows. Soil, first class.—*J. J. McArthur, 1883.*

Sub-division.—Much broken by small ponds, hay swamps or marshes and muskegs. It is well suited for grazing, as the supply of hay and water is abundant, while the bluffs of wood afford good shelter.—*W. Beatty, 1883.*

- 47.** *Outlines.*—Is slightly-undulating and thickly interspersed with patches of willows and swamps. Poplar bluffs are scattered throughout. Soil, first class.—*J. J. McArthur, 1883.*

- 48.** *Outlines.*—The northerly tier of sections have a soil of first class quality, being a black mould on a subsoil of clay or sandy loam. There are numerous swamps and small lakes, some of which are alkaline. There is a considerable quantity of poplar, some of which is of good size.—*T. Kains, 1883.*

Is undulating, and thickly interspersed with swamps and patches of willows. In the east half is a large quantity of poplar.

A lake encroaches on the east side, and covers two sections. Soil, first class.—*J. J. McArthur*, 1883.

49. *Outlines*.—Generally level country, thickly dotted with bluffs of poplar, some of which are of considerable area. Willow clumps are numerous, and fringe the many ponds and swamps which are scattered throughout the township. The soil is a black loam, varying from 10 to 15 inches in depth; clay and, in places, sand loam subsoil.—*T. Kains*, 1884.
50. *Outlines*.—Slightly undulating country, thickly dotted with dense willow clumps and bluffs of small sized poplar. The northern part of the township is broken by Beaver Lake, while the whole of it is well drained by a medium sized creek which flows north nearly through the centre of the range. The timber is small, though occasional bluffs are met with containing timber of fair size. This is a first class township, and well adapted for farming purposes. The soil is excellent, being a black loam, from 7 to 18 inches in depth, having a subsoil of clay.—*T. Kains*, 1884.
51. *Outlines*—Is entirely in Beaver Lake, with the exception of a narrow strip of land varying from one-half to one mile in width, lying along the westerly boundary. Several of these broken sections have settlers upon them, who find the soil to be of first class quality and well adapted for farming purposes. Three fair sized creeks enter the lake within a short distance of each other in this township, and abound in fish.—*T. Kains*, 1884.
52. *Sub-division*.—The east part of the township is covered by Beaver Lake; the balance is thickly covered with dense grey willows, poplar and fallen timber. A creek crosses the line in the southern part of Section 30. The soil is excellent.—*G. A. Simpson*, 1883.
53. *Sub-division*.—Low and, in many places, wet, with extensive alkali swamps. The surface is covered with small brush and clumps of willow. Beaver Lake is partly in the south-east corner of the township, covering Section 1 and part of 2, 11 and 12. The township is better adapted for grazing than for agricultural purposes.—*G. A. Simpson*, 1882-83.
54. *Sub-division*.—Low and wet, being covered with numerous willow marshes. The high land is covered with willow and occasional bluffs of poplar. Beaver River enters on Section 1 and leaves on 31. This stream is about 120 feet wide and 6 feet deep. The soil is classes 2 and 3. The Edmonton and Battle River trail crosses from Section 18 to 3.—*G. A. Simpson*, 1883.
55. *Sub-division*.—Four-fifths of the township is timbered with poplar, and the balance with high and scrub willows. The soil is generally good, and class 1. Beaver Creek passes through the western side of the township.—*D. Beatty*, 1882-83.
56. *Sub-division*.—North, timbered with thick willows, poplar, and a few birch, and in Section 34 spruce. The line crosses several marshes.—*J. J. McArthur*, 1883.
Sub-division.—Timbered throughout with poplar, except a few openings, which are covered with scrub and high willows.

There is a large muskeg or lake extending across the township from Section 18 to 36, averaging about 250 yards wide. It has thick willows on both sides. In Sections 36, 13, 14 and 16 are also lakes with muskeg and willows. The soil, generally, is good.—*D. Beatty*, 1882-83.

- 57. Sub-division.**—Chiefly timbered with poplar and, in places, with pitch pine and small spruce. The soil of the township is generally light on the high ground, and the lower portions are full of willow swamps and muskegs, which cover about one-third of the township. There are numerous sandhills and several swampy lakes, one of 300 or 400 acres being in Section 7.—*D. Beatty*, 1882-83.
- 58. Outlines.**—This township is cut into almost two equal parts by the River Saskatchewan. The part lying to the south of the river is solid bush and muskeg. There are clumps of fine spruce near the river, while the balance of the timber is small poplar and willow. The part north of the river is undulating, almost covered with dense poplar and willow, but the timber is generally small. Scattering spruce were noticed throughout this part of the country. The Edmonton and Battleford trail is on the north side of the river, and keeps close to the top of the bank throughout. Soil, second-class. A few settlers are located on the north side of the river, at the east side of the range.—*T. Kains*, 1884.
- 59. Outlines**—Is generally undulating throughout, and wooded with 2 to 5-inch poplar, high grey willows, scattered bluffs of poplar, and clumps or belts of spruce, from 4 to 10 inches in diameter. A great portion of the north-eastern part is submerged by Smoky Lake, along the south side of which there are numerous large marshes. The country is well watered by small lakes and a few small creeks. The soil to the east consists of about 5 inches of clay loam, which is underlaid by a stiff clay. In the western half a subsoil of sand is overlaid by about 6 inches of a black sandy loam. The township is unsuited for agriculture.—*C. A. Magrath*, 1884.
- 60. Outlines.**—The eastern portion consists of hills, densely timbered with 5 to 15-inch pitch pine and small poplar, also flats, which are generally muskeggy, and wooded with spruce and tamarac from 4 to 10 inches in diameter. The western portion is generally undulating, and wooded with 4 to 8-inch poplar and spruce and tamarac in the small muskegs. The southern portion is, for the most part, submerged by Smoky Lake, along the north side of which there is a pack trail. The country surrounding this lake is not so heavily timbered, there being less spruce and tamarac and more small poplar, with burnt and fallen timber, than in the northern portions of the township. The White Earth River runs south-east from Section 35 to Section 12, and there are numerous small creeks and lakes throughout the township. In the eastern parts a light sandy loam overlies a sandy subsoil, while in the

west and south a clay subsoil is overlaid by either a sandy, a black, or a clay loam. The township is unsuited for agricultural purposes.—*C. A. Magrath*, 1884.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XIX

5. *Outlines*.—West, surface undulating, rolling and broken by numerous coulées, which have small ponds along the bottoms. Soil, sandy loam, mixed with gravel. A creek crosses the north-west, and the McLeod and Benton trail passes south-east from Section 31. The east is rolling prairie. Soil, sandy loam, with clay subsoil; gravelly in places.—*C. E. Wolff*, 1883.

South, rolling prairie, with the soil washed out; somewhat stony. Vegetation rather poor, and signs of alkali.—*O. J. Klotz*, 1883.

6. *Outlines*.—Surface undulating and rolling. Soil, sandy loam, mixed with gravel, and much of the subsoil, clay. A marsh in the north half of Section 31, but water, generally, very scarce.—*C. E. Wolff*, 1884.

7. *Outlines*.—West. Soil, a hard grey clay. Part of Section 6 is covered by a shallow marsh, and in Section 1 the line crosses a watercourse, but, generally, water scarce. In the east the soil is a sandy loam, mixed with gravel, and the grass is poor. The general surface of the township is undulating.—*C. E. Wolff*, 1883.

8. *Outlines*.—North, undulating prairie, with sandy loam soil and good grass. No water.—*O. J. Klotz*, 1884.

West, this township consists of undulating and rolling prairie. The soil in the west is a hard grey clay. In the east it is a sandy loam, mixed with gravel. The grass is poor and water scarce. The Walsh and McLeod trail crosses the township.—*C. E. Wolff*, 1884.

9. *Outlines*.—Along the north it is an open, level prairie, with a soil varying from sandy to sandy loam, on a sandy loam subsoil. No wood. A coulée crosses Section 36.—*A. Bourgeault*, 1883.

Is very dry, rolling land, broken only between Ranges 18 and 19 by a large slough in Chin Coulée. The soil is very light, sandy loam. Growth of grass, short.—*F. W. Armstrong*, 1883.

South, good, undulating prairie, covered with good grass and flowering vetches. Rather deficient in water.—*O. J. Klotz*, 1882.

Sub-division.—The greater portion of this township is an excellent clay loam, and under cultivation would produce excellent crops. It has a good growth of grass and wild vetches. There are several large fresh-water ponds or lakelets in the interior. A few sections in the south-east part are broken by Chin Coulée and its smaller tributary coulées the banks of which are strewn with boulders. Except in these sections, the land is all class 1.—*C. A. Bigger*, 1884.

10. *Outlines*.—Along the north it is a broken and rolling prairie. Belly River crosses Sections 31, 32, 33 and 34, when it enters the

next township north; it re-enters on Section 36, flowing eastward into Range 18, in a valley about 1,300 feet broad and 200 feet deep, wooded, in places, with cottonwood trees and willows. The land is undulating prairie, with a soil of fair quality, ranging from a sandy to a sandy loam.—*A. Bourgeault*, 1883.

Is broken on the north by Belly River. Some wood in river valley. On the east and west boundaries the soil is a light and dry sandy loam, and the surface is rolling.—*F. W. Armstrong*, 1883.

Sub-division.—The soil is a sandy loam, of a fairly good quality. The north part is very much broken by Belly River, along which a few groves of cottonwood are growing. Excellent river bottom lands occur in Sections 33, 34 and 35. Fresh-water ponds existed at time of survey (July) in various parts of the township.—*C. A. Bigger*, 1884.

- 11. Outlines.**—Is divided in two by Little Bow River, which, in the south-east has its confluence with Belly River. The soil is all very light and stony. No timber, except on Belly River.—*F. W. Armstrong*, 1883.

Belly River makes a bend into the south-east of the township, entering by Section 3 and leaving by Section 1. Along the southern boundary the land is undulating prairie, with a sandy loam soil. Near the south-east corner the north branch of the river—after coursing southwards from the north centre of the township—enters and forks into the Belly River.—*A. Bourgeault*, 1883.

Sub-division.—The greater part of the land is inferior. Little Bow River runs through the east part north and southwards, with numerous coulées branching from it in every direction, which leaves very few eligible sections in the east half of the township. Belly River enters in Section 3, and, after making several curves, leaves near the south-east angle of Section 1. The soil is chiefly a light sandy loam. A grove of good timber grows on the line between Sections 2 and 3, and on Section 1, on the north bank of Belly River.—*C. A. Bigger*, 1883.

- 12. Outlines.**—North, Little Bow River is about two and a-half miles south of this line. The soil is principally clay loam.—*C. A. Magrath*, 1882.

Is broken by Little Bow River, whose banks here are steep and very stony. The soil east and west is very light and sandy.—*F. W. Armstrong*, 1883.

Sub-division.—The soil is poor, and very few sections higher than class 3. The Little Bow River enters on Section 30 and flows across the township, which it leaves on Section 2. The banks are high, and are broken by numerous coulées. Owing to the great rainfall of this season quite a body of water was flowing down this river, which, at this season of the year (end of July), usually exists only in pools. The soil is generally a light sandy loam, supporting a slight growth of grass. There is no wood.—*C. A. Bigger*, 1884.

- 13. Outlines.**—The land is all undulating or gently-rolling prairie, and ranks first class land, of a good sandy loam, with a kind of grey

clay subsoil, covered with abundance of grass. Water is very scarce.—*P. R. A. Belanger*, 1882.

South, the soil is principally clay loam.—*C. A. Magrath*, 1882.

Sub-division.—Gently-undulating prairie, composed of a light sandy loam soil, from 4 to 9 inches deep, on a grey clay subsoil. The growth of grass was short, and only fit for grazing purposes. No surface water and no wood.—*J. F. Snow*, 1883.

- 14. Outlines**—The surface is undulating or gently-rolling prairie, and the soil first class, being good sandy loam, with a grey clay subsoil and abundance of grass. Water is very scarce.—*P. R. A. Belanger*, 1882.

Sub-division.—Gently-undulating prairie, with an even surface and a soil composed of sandy loam, from 6 to 12 inches deep, on a grey clay subsoil. Under an ordinary rainfall this soil ought to produce excellent crops; but owing to the extreme dryness of this season (1883) the vegetation is rather stunted. Surface water is scarce, and there is no permanent supply nearer than the Little Bow River, three miles from the western boundary.—*J. F. Snow*, 1883.

- 15. Outlines**.—Gently-rolling prairie, with first class sandy loam, on a clay subsoil. Abundance of grass, but surface water is very scarce.—*P. R. A. Belanger*, 1882.

Sub-division.—Towards the north it is rolling, but southwards it is a fine level plain. The soil is a clay loam, very uniform throughout, and first class. Water is not plentiful, and the marshes and sloughs dry up in summer. If the want of surface water is not felt, this township is eminently suitable for cultivation. There is no timber.—*S. L. Brabazon*, 1883.

- 16. Outlines**.—North, is rolling prairie, with rich grass vegetation, generally; but no water was found in the numerous marshes between the hills.—*O. J. Klotz*, 1882.

All undulating or gently rolling prairie. Soil, first class sandy loam, on a grey clay subsoil. The township is covered with abundance of grass, but surface water is very scarce.—*P. R. A. Belanger*, 1882.

Sub-division.—Very similar to Township 15 of this range. Towards the south it is rolling, but northwards it is undulating, with long slopes. There are a good many surface stones, but they are small in size, and not detrimental to cultivation. Under a favorable rainfall this township would give a luxuriant crop, but under any circumstances must be good. There is a scarcity of surface water, and no wood.—*S. L. Brabazon*, 1883.

- 17. Outlines**.—Principally hilly and rolling prairie, with gravelly knolls, a clay subsoil, and an upper soil which rates mostly second class.—*C. F. Miles*, 1883.

South, rolling prairie, and rich grass vegetation. Numerous dry marshes between the hills.—*O. J. Klotz*, 1882.

Sub-division.—There is some fine land in this township, and sufficiently level for agricultural purposes in a number of places, though the general character is rough and uneven. The soil is dry and, in places, stony, and consists of clay loam and sandy

loam. Classes 2 and 3. Water is scarce. Except for grazing, most of the township is not eligible land, and wells would require to be dug for the cattle.—*S. L. Brabazon*, 1883.

- 18. Outlines.**—Rolling and hilly prairie, with some few ponds in the north half. The west half is principally sandy loam. The east half is clay loam, rating second class.—*C. F. Miles*, 1883.

Sub-division.—Very hilly. Soil, sandy loam, and about class 2; but the unevenness of the township renders it unfavorable for tillage. There are several wet, marshy places, or ponds, which, in most cases, dry up as the summer advances. Although the summer rainfall may be light, appearances indicate that the soil in this region possesses the property of preserving grass green through a drought which would kill vegetation in the Province of Quebec.—*S. L. Brabazon*, 1883.

- 19. Outlines.**—Hilly and rolling prairie, the most easterly tier of sections being much broken by deep ravines running into the Bow River. Soil, clay and sandy loam, with tops of elevations generally gravelly. There are numerous ponds among the hills in the westerly half of the township.—*C. F. Miles*, 1883.

Sub-division.—Rolling and undulating prairie, with black sandy loam, from 8 to 11 inches deep, on a clay and sandy subsoil. Very good for cultivation in the low places or bottoms, but in general it can only be rated class 2, owing to the scarcity of water. There are several small swamps, in which grass is plentiful. There is no wood.—*E. Boivin*, 1884.

- 21. Sub-division.**—The C.P.R. crosses the township. North of the road the country is nearly level prairie—classes 2 and 3—and well suited for agricultural purposes, especially the north-west. Water is, however scarce.—*E. C. Dawson*, 1883.

NOTE—The portion north of the C.P.R. consists of about two tiers of sections. All south of the railway lies in the Blackfoot Indian Reserve.

- 22. Outlines.**—Rolling and hilly. Soil, clay loam, with a few stones. may be classified principally as number one. Several good seams of coal were observed in this township.—*C. F. Miles*, 1882.

Sub-division.—Mainly rolling prairie. The north part is more hilly than rolling, and the tops of the hills are stony. The south-eastern corner is very sandy, gravelly and bare. Surface water appeared to be scarce at the time of survey (September), except some sloughs in the valleys. Judging from the quantity of manure, this must have been a favorite spot for the buffalo.—*E. C. Dawson*, 1883.

- 23. Outlines.**—Undulating prairie, with clay loam soil.—*C. F. Miles*, 1882.

Rough and hilly prairie, with numerous sloughs, many of them dry. The soil is clay, with a little surface gravel and field stone. This township ranks as third class.—*A. W. McVittie*, 1882.

Sub-division.—Rolling prairie, sloping south-easterly and north-westerly from a ridge which extends from Section 18 to Section 35. The soil is a light sandy loam, of from 4 to 11 inches deep—except on the before-mentioned ridge, where it is more or

less gravelly—and overlies a subsoil of clay, and may average class 2. There are a few small ponds throughout the township, which are fresh and good.—*J. J. Burrows*, 1883.

- 24. Outlines.**—North, surface very rough. Soil, generally a gravelly loam, from 10 to 15 inches deep; subsoil, gravelly clay, hardened. From the middle of this range there is a clear view of the Rocky Mountains.—*W. Ogilvie*, 1882.

West, rolling prairie, with a few stones. Dead Horse Lake covers Sections 19 and parts of 18 and 30. The water is muddy and shallow.—*C. F. Miles*, 1882.

East, Sections 1 and 12 are rolling prairie; Sections 13, 24, 25 and 36 are very hilly. There are numerous sloughs, many of them dry. The soil is clay, with a little surface gravel and field stone. This township ranks as third class.—*A. W. McVittie*, 1882.

Sub-division.—Heavy-rolling prairie, with a soil of sandy loam, class 2, excepting Sections 20, 29, 30, 31 and 32, which are clay loam, and class 1. A shallow alkaline lake occurs on Sections 8, 9, 16, 17 and 18. Dead Horse Lake breaks the western boundary in Sections 18, 19 and 30. Its waters are shallow and muddy. No wood.—*J. J. Burrows*, 1883.

- 25. Outlines.**—South, surface very rough. Soil, generally a gravelly loam from, 10 to 15 inches deep.—*W. Ogilvie*, 1882.

Sub-division.—Heavy-rolling prairie, the north and south portions of the township being more elevated than the centre. The soil is a sandy loam on a clay subsoil, except the northern and southern tiers of sections, which have a gravelly subsoil. Several small lakes occur, one of which, on Sections 21 and 22, is fresh and good; and two of which, on Sections 30 and 31, are alkaline. The township is fairly adapted for farming.—*J. J. Burrows*, 1883.

- 26. Outlines.**—West, the country is hilly. Water was crossed in Sections 6 and 18. East, Sections 1 and 12 are rolling. The remaining four miles are very hilly. The northern part of 24 and the southern part of 25 are scrubby. A small creek was crossed in the northern part of Section 24.—*T. R. Hewson*, 1883.

In the north-east there are some poplar bluffs. Soil, second class.—*T. R. Hewson*, 1883.

Sub-division.—The south half is gently-rolling prairie, while the balance is rougher, and inclined to be hilly, especially the two northern tiers of Sections. Many fine water springs are found in the hilly portions. The soil is a sandy loam—generally class 2—overlying a subsoil of clay in the southern portion, and a gravelly subsoil in the northern portion.—*J. J. Burrows*, 1883.

- 27. Outlines.**—The country is rolling, with a little inclination to roughness in some parts of the east. Sloughs were crossed in Sections 7 and 19. A little wood was found between Sections 25 and 36.—*T. R. Hewson*, 1883.

South, rolling prairie, with a sandy loam soil. No water.—*J. J. Burrows*, 1883.

28. Outlines.—North, undulating, and rolling towards the north-west, and along the banks of the Red Deer River, and for some distance inland, the country is broken and hilly, with steep and precipitous banks, from 180 to 600 feet high. Clay, ironstone and coal seams crop out in abundance along these banks. Back from the river the country is good for farming. Soil, clay loam. Class 1.—*T. Fawcett*, 1883.

Hilly country. Soil, dry clay. The confluence of the Rosebud and Red Deer Rivers is on this township. The country in the vicinity of the Red Deer is much broken by deep ravines, in which there is considerable poplar and spruce timber.—*T. R. Hewson*, 1883.

29. Outlines.—The eastern portion of this township is broken by ravines, some of which contain small creeks. The grass is scant—scarcely sufficient growth to form sod. Clay soil. Class 3.—*J. K. McLean*, 1884.

South, Sections 1, 2 and 3 are hilly. Nos. 4, 5, and 6 are broken by the steep banks of the river valley. Red Deer River crosses the line in Section 6. Coal was found in the river valley in this section. A creek crosses the line in Sections 6 and 5, and an old trail in 3.—*T. Fawcett*, 1883.

30. Outlines.—West, open, rolling prairie. A creek crosses the line in Section 18, and a branch of it in 19. In the vicinity of the creek a small quantity of wood was found.—*L. R. Ord*, 1884.

The eastern portion broken by ravines. Grass, scant. Clay soil. Class 3.—*J. K. McLean*, 1884.

31. Outlines.—West, open, rolling prairie. A small creek crosses the line in Section 7.—*L. R. Ord*, 1884.

The eastern portion is rolling prairie, with scant grass. Clay soil. Class 3.—*J. K. McLean*, 1884.

32. Outlines.—North, Sections 34, 35 and 36 are rolling prairie; Sections 31, 32 and 33 are hilly. The soil is fair. The line crosses several marshes.—*E. Bray*, 1883.

West, open, rolling prairie. The line crosses a lake in Sections 30 and 31.—*L. R. Ord*, 1884.

Rolling prairie. Clay loam soil; clay subsoil. Class 2. A creek in Section 1.—*J. K. McLean*, 1884.

33. Outlines.—West, open, rolling prairie. Water is abundant, in numerous ponds.—*L. R. Ord*, 1884.

The east half is hilly, with a heavy growth of willow round the numerous ponds. Sand and clay loam soil; clay subsoil. Class 3.—*J. K. McLean*, 1884.

Outlines.—West, rolling prairie. Marshes are numerous. Wood and scrub around the ponds.—*L. R. Ord*, 1884.

The south-east quarter, hilly prairie; third class. The north-east, rolling prairie; class 2. Sand loam soil; clay subsoil. Poplar and willow scrub round the ponds. East, hilly and rolling prairie. A large lake was crossed in Sections 25 and 36, the greater part of the line, in 36, being under water.—*J. K. McLean*, 1884.

35. Outlines.—West, rolling, brushy prairie. Line crosses several ponds, and in Section 31 a creek.—*L. R. Ord*, 1884.

A range of hills runs through the centre of the east half. North and south of these hills, rolling prairie, the sloughs and ponds being heavily fringed with poplar and willow scrub. Sand loam soil; clay subsoil. Class 2.—*J. K. McLean*, 1884.

- 36.** *Outlines.*—North, going westwards, the first two miles is hilly, and broken by numerous ponds and basins of water, after which there is undulating prairie, with a few grass swamps and ponds. A large lake, extending about two miles north and one and a-half miles south of the line, was crossed in Sections 31 and 32. Poplar and willow of small size occur. Soil, first and second class. *T. Kains*, 1883.

West, rolling prairie, with scattered bluffs. In Section 6 a marshy creek crosses the line. Water near the line in 30 and 31. Surface soil, class 2, on clay subsoil.—*L. R. Ord*, 1884.

The east half is rolling prairie, the ponds being fringed with willow. Sand loam soil; clay subsoil. Class 2.—*J. K. McLean*, 1884.

- 37.** *Outlines.*—Some hilly prairie in the east, but generally, rolling and undulating. Partially wooded with poplar bluffs and clumps of grey willows. Numerous ponds, fringed with willows. The east line crosses a muddy lake in Section 25, and another in 36. Soil, sandy loam, with sandy subsoil.—*C. F. Miles*, 1884.

The south-east is hilly, with wet valleys. The south centre is rolling, and a great part of the four south-westerly Sections are covered with a muddy lake. Soil, classes 1 and 2.—*T. Kains*, 1883.

- 38.** *Outlines.*—Rolling and undulating prairie, interspersed with numerous ponds and lakes, and densely wooded, in places, with poplar and willows, with the exception of the north-east quarter, which is more open. Soil, black sandy loam and clay loam. First class.—*C. F. Miles*, 1884.

- 39.** *Outlines.*—The north-west quarter is rather hilly and rolling, with deep ponds and bluffs of poplar and willows. The remainder is undulating and more open prairie. The soil consists, generally, of a black sandy loam. First and second class. A branch of Red Willow Creek meanders easterly across this township, emptying ultimately into the Battle River. The supply of water in the northerly half is plentiful, but limited in the south.—*C. F. Miles*, 1884.

- 40.** *Outlines.*—North, the line passes through a well-wooded section of poplar, from 2 to 8 inches in diameter. It also intersects a range of low hills, which slope towards Buffalo Lake. The western part is considerably broken up with small and deep lakes. Soil, first class.—*C. A. Magrath*, 1883.

Consists of, principally, hilly and rolling prairie, with numerous ponds, interspersed with bluffs of poplar and willows. Soil, black sandy loam. Second-class. The greater part of the line in Section 31 is under water.—*C. F. Miles*, 1884.

- 41.** *Outlines.*—West, rolling prairie, alternating with ponds, lakelets and poplar, and willow bluffs. An old Edmonton trail was crossed in Section 7.—*C. F. Miles*, 1884.

East, rolling prairie. In Section 1 is a little brush, and in Sections 13 and 25 some scrub. Sloughs are very numerous. Soil, very good.—*L. R. Ord*, 1883.

- 42. Outlines.**—West, rolling, hilly and undulating prairie, with poplar bush and numerous ponds and lakelets. The north-western part of Section 7 is almost all covered by a large lake.—*C. F. Miles*, 1884.

East, rolling, prairie with poplar and willow bluffs and scrub. In Section 24 the line crosses the Edmonton cart trail and Meeting Creek. The valley of the creek is very wide, extending from the southern half of Section 13 to the centre of 25. In Section 36 is another creek, running in the bottom of a coulée. Sloughs are numerous.—*L. R. Ord*, 1883.

- 43. Outlines.**—North, undulating prairie, thickly covered with patches of poplar and dense brush. Several ponds were crossed, and in Sections 31 and 32 a good sized lake. The Bear Hill trail was crossed in Section 31.—*J. Kerr*, 1884.

Gently-undulating and rolling land, with bluffs of small poplar. The wood is small, and of no economic value, but the land is excellent for agriculture. The soil is a rich black loam, 12 inches deep, with clay subsoil.—*L. R. Ord*, 1883.

- 44. Outlines.**—North, Battle River crosses the base in Section 31, and having widened out into a lake, completely fills the whole valley. This lake extends north six or seven miles, and has a width of about half a mile. The hills leading down to the lake are about 90 feet high. On the west side some good poplar, of fair size, was noticed. The balance of the range is undulating country, having first class soil, and contains ponds and swamps, clumps of willows, and some poplar bluffs, the timber of which is of fair size.—*T. Kains*, 1883.

Gently rolling land, with bluffs of small poplar. Battle River crosses the north boundary in Sections 31 and 32. Here is a lake expansion, about 30 chains wide, at the bottom of a valley, a mile across and 300 feet deep, with banks of clay, mostly wooded. This lake expansion extends nearly all the way across the township, and is said to abound in fish. The land is all generally good, with a black loam, slightly sandy, and well fitted for settlement.—*L. R. Ord*, 1883.

Sub-division.—Battle River, in its lake expansion, enters on the north boundary of Section 31, and flows first south through Sections 31, 30, 19 and 18, then east through Sections 17, 16, 9, 10, 11 and 2, leaving on the eastern boundary of Section 1. The river valley is nearly one mile broad, with banks from 200 to 300 feet high, generally sloping towards the river, but occasionally precipitous. The soil is rich and fertile, being composed of a clay or a sandy loam, about 12 inches deep, and having good vegetation. The surface is dotted with bluffs of small poplar and patches of thick brush. Sloughs, lakes and a few brooks, with excellent water, in most parts of the township.—*J. Kerr*, 1884.

- 45. Outlines.**—East and west, the expansion of Battle River runs through the south-west corner of this township. The south half

is traversed by Dried Meat Creek, a creek about 50 links wide, which flows into Battle River. The south-west part is interspersed with poplar bluffs and beautiful prairie openings. The remainder of the township is slightly undulating, with numerous small swamps, and more or less overgrown by willow scrub. The soil, throughout, is of the best quality.—*J. J. McArthur*, 1883.

South, undulating prairie, with poplar, willow and scrub. Dried Meat Lake, an expansion of Battle River, was crossed in Section 6. A few small marshes were crossed also.—*T. Kains*, 1883.

Sub-division.—High-rolling land, with deep ravines along the creeks which flow into Dried Meat Lake, which crosses the south-west corner of the township. The general elevation of the surface is about 150 feet above the lake, and Dried Meat Hill, on Sections 17 and 18, rises 150 feet above the general level. The township is generally scrubby prairie, with patches of poplar and high willow, and has a fair supply of surface water. The soil is a good class 2, of 12 inches deep on a clay subsoil.—*W. Beatty*, 1883.

46. *Outlines.*—West and east, is slightly undulating, and more or less overgrown by willow scrub. There are poplar bluffs scattered throughout, and many marshes. Soil, first class.—*J. J. McArthur*, 1883.

Sub-division—Slightly undulating, with a black loamy soil, 3 to 15 inches deep, on a clay subsoil. There are a few small ponds, and numbers of muskegs and willow swamps. The general surface of the prairie is scrubby, with patches of high willow and poplar.—*W. Beatty*, 1883.

47. *Outlines.*—Is comparatively level, with scattered bluffs of poplar. There are many small swamps, and the whole township is more or less overgrown by willow scrub. Soil, first class.—*J. J. McArthur*, 1883.

48. *Outlines*—North, prairie, with clumps of bush and numerous ponds and sloughs. A large lake covers the western half of Section 35.—*C. A. Magrath*, 1883.

In the interior is a large lake. The land is undulating, with many ponds and marshes. Alkali is noticeable in low spots. There are many scattered bluffs of poplar. Soil, first-class.—*J. J. McArthur*, 1883.

49. *Outlines.*—Is broken by the Beaver Hills, which traverse its eastern boundary and extend well into the centre. The rest of the township is undulating country, with bluffs of poplar and clumps of willows, the timber of which becomes heavier in the Beaver Hills. A cart trail runs north and south, nearly through the middle of the range, and connects the telegraph trail with a small settlement on the western shore of Beaver Lake. The soil is excellent, being a vegetable mould, from 10 to 15 inches in depth, with a clay subsoil.—*T. Kains*, 1884.

50. *Outlines.*—Undulating country, more or less covered with timber of fair size, especially towards the western boundary, which is altogether in the Beaver Hills. Ponds and swamps are

numerous, the margins of which are fringed with thick willows, and when the water becomes low excellent hay land is afforded. A cart trail runs from north to south, almost in the centre of the range, connecting the small settlement on the west shore of Beaver Lake with the telegraph trail. Soil is excellent, and classes 1 and 2.—*T. Kains*, 1884.

51. Outlines.—Lies on the easterly slope of the Beaver Hills; is well wooded, and excellently drained by three fair sized creeks, which run easterly into Beaver Lake. Numerous ponds and swamps were noticed containing—in dry weather—excellent hay lands. Soil, first class.—*T. Kains*, 1884.

52. Outlines.—The eastern third is on the slope of the Beaver Hills. There is a growth of dense grey willows, poplar and fallen timber. A creek crosses the east line in the southern part of Section 25.—*G. A. Simpson*, 1883.

53. Sub-division.—North, the line runs through part of the Beaver Hills. Timber consists of poplar, spruce, birch and grey willow. A large marsh was crossed in Section 34. The hills range from 10 to 70 feet high. To the east there is small clumps of willows. The land lies low, and rates classes 2 to 4. To the west the township is heavily timbered with poplar and spruce, and the soil is poor. Most of the timber is small, but some of it in the south-west sections measures 12 to 30 inches. There is a good area of surface water, but not in the quantity of numbers of the neighboring townships.—*G. A. Simpson*, 1883.

54. Sub-division.—The south-western half is in the Beaver Hills, and is hilly and well wooded. The elevations range from 10 to 80 feet high. The north-east half is covered with willow scrub, and being full of marshes, it only appears to be suitable for grazing purposes. It was, however, surveyed in April. The Edmonton and Battle River trail crosses north-east.—*G. A. Simpson*, 1883.

55. Sub-division.—The greater portion of the township is lying between Beaver Creek and the Beaver Hills. The south-west corner extends into the hills. The township is timbered with poplar, broken into bluffs, with dense high and scrub willow. The soil is generally good, but is, in places, light and sandy. Blind Creek was crossed three times in Section 12, and in Section 1 another creek. Creeks cross the west line in Sections 18 and 31, and the Saskatchewan and Beaver Lake trail in 19.—*D. Beatty*, 1882-83.

56. Outlines.—North, undulating, with poplar and willows. In Sections 36, 35, and the east half of 34, the wood is heavier than in the remaining sections, where it is scrubby. Several marshes. In the west are poplars and numerous sloughs. Beaver Creek was crossed in the north half of Section 6.—*J. J. McArthur*, 1883.

Sub-division.—The north two-thirds is timbered with poplar. The south one-third is covered with willow scrub, high willow and scattered poplar. There are willow swamps and muskegs scattered throughout. The soil is good. Beaver Creek, the outlet of Beaver Lake into the Saskatchewan River, runs across the south-west corner. It is about 70 feet broad and from 6 to 10 feet deep.—*D. Beatty*, 1882-83.

- 57. Outlines.**—West, overgrown with willows and poplar. Line crosses several marshes. Soil, light and sandy.—*J. J. McArthur*, 1883.

Sub-division.—Timbered throughout with poplar, which, in a few places, is mixed with small spruce, and has a dense undergrowth of willow. About one-quarter of the township is low and swampy, and the soil on the high grounds is generally light.—*D. Beatty*, 1883.

- 58. Outlines.**—Is cut by the River Saskatchewan, the greater portion being on the south side of the stream, and consists of solid bush country, with a sprinkling of muskegs and swamps. The part north of the river is much broken by the valleys of numerous streams which empty into the river, and is thickly dotted with poplar and spruce. A band of Indians occupy the land on the north side of the river, and have several houses, and a few improvements, in the way of ploughing, &c., made. Soil, second and third class. The cart trail from Edmonton to Victoria crosses in Section 25.—*T. Kains*, 1884.

- 59. Outlines.**—Generally undulating throughout, and, for the most part, densely wooded with 3 to 6-inch poplar and high grey willows. There is considerable fallen timber and scattered spruce in some portions, while in other portions—towards the south—the country is not so rough. This township may be classed as bluff. In the eastern half about 7 inches black sandy loam overlies sand. The soil becomes heavier and richer towards the west, consisting of about 7 inches of black loam over a clay subsoil. Is well watered by small bodies of water, but has no large lakes or running streams of any importance. There are several pack trails in this township, many parts of which are unsuited for agricultural purposes.—*C. A. Magrath*, 1884.

- 60. Outlines.**—Towards the north it is low-lying, wet and slightly undulating. The surface rises to the south, and is undulating throughout. The township is densely wooded in all parts, chiefly with 3 to 7-inch poplar and willows. Towards the north there is considerable 5 to 15-inch spruce and 4 to 10-inch tamarac. There are numerous marshes to the south. These are generally bordered with spruce timber. The soil consists of black loam to the depth of about 5 inches, overlying a stiff clay. Smoky Lake submerges the greater part of Sections 12 and 13, about half of Sections 11 and 14, and a small portion of Sections 10 and 15. There are numerous small bodies of water, surrounded by either marsh or muskeg. There are a few pack trails. This township is unsuited for agricultural purposes.—*C. A. Magrath*, 1884.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN

RANGE XX.

- 5. Outlines.**—Undulating country. The south-west and much of the east is broken by numerous coulées, which have small ponds along the bottoms. Soil, sandy loam, mixed with gravel. The McLeod and Benton trail crosses 36.—*C. E. Wolff*, 1884.
South, rolling prairie. The soil is good. Good grazing land. Creeks cross the line in Sections 1, 2, 5 and 6.—*O. J. Klotz*, 1883.
- 6. Outlines.**—Surface undulating and rolling. Soil, sandy loam, mixed with gravel.—*C. E. Wolff*, 1883.
- 7. Outlines.**—Undulating country. Soil, clay loam, with clay subsoil. Water scarce.—*C. E. Wolff*, 1883.
- 8. Outlines.**—North, undulating prairie, with sandy loam soil, and good grass. A small marsh in Section 32.—*O. J. Klotz*, 1883.
West, rolling land, with a sandy loam soil. The trail to Fort Walsh and a small creek were crossed in Section 6. Water scarce.—*F. W. Armstrong*, 1883.
East, undulating and rolling prairie. Soil, a hard grey clay. No water on this side of the township.—*C. E. Wolff*, 1883.
- 9. Outlines.**—West and east is very dry, rolling land. The soil is very light sandy loam. Growth of grass, short.—*F. W. Armstrong*, 1883.
South, good undulating prairie, covered with good grass and flowering vetches. Rather deficient in water.—*O. J. Klotz*, 1883.
Sub-division.—Level prairie. Soil, clay loam, of 4 to 6 inches deep, on a clay subsoil. Class 2. Surface water is somewhat scarce, and there is no wood. The Fort McLeod and Medicine Hat trail crosses the township —*J. Warren*, 1883.
- 10. Outlines.**—West and east is dry, rolling prairie. Soil, a light, sandy loam. Belly River flows in a valley which is about half a mile broad, and with banks about 300 feet high. Coal crops out in numbers of places along the banks. The river enters the township on Sections 18, 19 and 30, and leaves by 25 and 36, after a circuitous course.—*F. W. Armstrong*, 1883.
Sub-division.—The south half is rolling and undulating. The north is much broken by the ravines of Belly River, which crosses the township by a circuitous route from west to east—Section 19 to Section 36. The soil of the south is a sandy and clay loam, but more sandy and gravelly near the banks of the river. No wood.—*A. Bourgeault*, 1883.
- 11. Outlines.**—West and east is a very dry, rolling prairie. The soil is, in some places, a light sandy loam, with surface stone, and in others a grey clay.—*F. W. Armstrong*, 1883.
Sub-division.—In portions either level, rolling or hilly. Soils, either a good clay or a sandy loam, and class 1 for agricultural

purposes. Surface water is scarce, and there is no wood.—*J. W. D'Amours*, 1883.

- 12. Outlines.**—The north line enters the valley of Little Bow River, which, in Section 33, is about 80 feet in depth. The bed of the river, at Base Line, is 38 feet wide, and in the river bed water lies in pools about 2 feet deep. No current visible. The west side of the valley is thickly strewn with boulders.—*C. A. Magrath*, 1884.

The north-east quarter is broken by Little Bow River, whose banks here are steep and very stony. The soil in other parts is very light and sandy, except the west, which is a grey clay. Creeks cross the west line in Sections 7 and 30.—*F. W. Armstrong*, 1883.

Sub-division.—The land is rather too sandy or stony, and is generally rolling, except those sections broken by the banks of Little Bow River, which vary in height from 200 to 400 feet. The river is dry in some places, and crosses Sections 33, 28, 21, 22, 23, 14, 13 and 24. There are neither trees nor sloughs in the township.—*J. W. D'Amours*, 1883.

- 13. Outlines.**—Sections 1, 2, 3, 6, 7, 18 and 19 are rolling, 4 and 5 are in the river valley, and 30 and 31 are hilly. The Little Bow River crosses south, about two miles east of the west boundary, in a very broken valley, already described in Township 12.—*C. A. Magrath*, 1882.

Is rolling prairie, broken in the west by Little Bow River, a stream about 35 feet wide and 1 foot deep, running through a valley about half a mile wide and 80 or 100 feet deep. Suitable for cattle raising.—*P. R. A. Belanger*, 1882.

Sub-division.—The Little Bow River crosses this township, entering from the north, crossing Sections 33, 29 and 30, then south through 19, 20, 17, 9 and 4. The valley of this river is from three-fourths of a mile to one mile broad and from 75 to 100 feet below the prairie. The volume of water depends on the season. In July it is about 60 feet broad and 2 to 4 feet deep, with a rapid current, but in September it only lies in pools. The portion of the township east of the river is gently-undulating, with a sandy loam soil on a grey clay subsoil. The portion west of the river is more rolling, and is broken by deep ravines running into the valley of the river.—*J. F. Snow*, 1883.

- 14. Outlines.**—West, Section 6 is hilly; then 7 and 18 are cut up by coulées running in a north-easterly direction into the valley of Little Bow River. In Section 19 the valley of this river is entered; then the remaining sections are rolling. Soil, sandy loam.—*C. A. Magrath*, 1882.

North, east and south, the township is dry or rolling prairie. Little Bow River crosses the south line in Section 4, running through a valley about half a-mile wide and 80 or 100 feet deep. Township is suitable for cattle raising.—*P. R. A. Belanger*, 1882.

Sub-division.—Rolling prairie, inclined to be hilly in the western part. The soil is various. Along Little Bow River it is sandy and gravelly. The valley of the river is irregular in width, and broken by many deep ravines. Outside of the valley the soil

is a sandy loam, on a yellow or grey clay subsoil. Classes 2 and 3. In the valley, class 4. The river crosses from Section 3 to Section 18. The township is of little value, except for grazing. No wood.—*J. F. Snow, 1883.*

- 15. Outlines.**—Rolling prairie, rather hilly in the north. The soil is a black loam, slightly inferior in quality in the southern part of the township. There is generally good grass growing over the township.—*P. R. A. Belanger, 1882.*

West is dry, rolling prairie, with good soil, and small scattered marshes.—*O. J. Klotz, 1882.*

Sub-division.—Rolls heavily in places, has a very good loamy soil, sometimes sand, sometimes more of a gravelly nature, and an average class 2. Water is scarce, and beyond the 1st of July could not be depended upon for stock, except by means of wells. (See remarks in 17 and 18 of the 19th Range.) There is no timber.—*S. L. Brabazon, 1883.*

- 16. Outlines.**—The north and west is rolling prairie, and very dry. This township is inferior to the one east of it. In the southern part of this township is the height of land between the north and south. From the 5th Base Line, between Ranges 20 and 21, the Rocky Mountains can be plainly seen to the west and south-west.—*O. J. Klotz, 1882.*

Rolling prairie, rather hilly in places. The soil is a black sandy loam, generally class 2. There is good grass.—*P. R. A. Belanger, 1882.*

Sub-division.—Rather rough, especially in the north, where it is hilly. Soils, gravelly and sandy loams, in places, the best being class 2. The hills are nearly all gravel. The township shows fair crops of grass, and water is found in limited quantities in a few sloughs; but there are no running streams. There is no timber. (See remarks on Township 15 of this range).—*S. L. Brabazon, 1883.*

- 17 Outlines**—Is undulating prairie, till towards the northern part of the township, where it becomes rolling, and some water in marshes occurs.—*O. J. Klotz, 1882.*

East, rolling and hilly prairie, with varying soil; knolls generally gravelly, with clay subsoil.—*C. F. Miles, 1883.*

Sub-division.—Very hilly along the western boundary, but the land eastwards, merges into gently rolling and undulating prairie. The soil is a light sandy loam, about class 2. There are some wet marshes and a few ponds, and in their vicinity there is always to be found a luxuriant crop of grass. The chief value of the township is in its fitness for cattle grazing. There is no timber.—*S. L. Brabazon, 1883.*

- 18 Outlines.**—West, especially good is the soil in the southern part of this township, and fairly watered with ponds and marshes.—*O. J. Klotz, 1882.*

East, rolling and hilly prairie, with varying soil; knolls generally gravelly with clay subsoil.—*C. F. Miles, 1883.*

Sub-division.—It is quite hilly along the northern and western boundaries. The soil is mostly a clay and a black loam, and,

judging from the crop of grass, might be almost rated class 1. There are some marshes possessing a luxuriant crop of grass, and there are some ponds, all of which are fresh. In this Section much of the surface water dries. At time of survey (last of June) the grass was fast becoming hay. No wood.—*S. L. Brabazon*, 1883.

- 19. Outlines.**—West, prairie, with high-rolling hills. No water.—*T. Drummond*, 1882.

East, hilly prairie, with numerous ponds and grassy marshes. There is a good growth of grass among the hills.—*C. F. Miles*, 1883.

Sub-division.—The soil is all of excellent quality. The surface is rolling and undulating, and towards the east part very hilly, where numerous fresh-water ponds occur (August) in the valleys. The soil is mostly a black loam and class 1, being 6 to 10 inches deep on a clay subsoil. Several alkaline rivulets course through the township. The Blackfoot Indian Reserve lies to the north.—*C. A. Bigger*, 1884.

- 21. Outlines.**—East, undulating prairie; some stones. Several good seams of coal were observed in this township; also, some little timber, principally cottonwood, in the river valley.—*C. F. Miles*, 1882.

West, in Section 6 lies a large seam of coal, which had been lately worked. On the north side of the river is Crowfoot Creek, a stream of some size, with running water. The land ranks as second and third class.—*T. Drummond*, 1882.

Sub-division.—The C.P.R. (Crowfoot Station) crosses this township. North of the railway it is mostly rolling prairie, with a soil of black loamy earth, and class 1. Surface water is scarce, but if the climatic conditions are favorable this is the best kind of agricultural land. South of the railway is in the Indian Reserve, and was not surveyed. The Bow River passes to the south in the reserve.—*E. C. Dawson*, 1883.

- 22. Outlines.**—North, rolling and hilly prairie. Soil is sandy and clay loam—classes 2 and 3—stones and gravel. Crowfoot Creek was crossed in Section 34, and another in 33. East, rolling prairie, with some stones. Very little water.—*C. F. Miles*, 1882.

West, from Section 6, as far as Section 18, the land is second class. The remainder may be ranked as first class.—*T. Drummond*, 1882.

Sub-division.—West of the Crowfoot Creek it is much broken and very hilly, with a soil of good quality, but which would be difficult to plough on the slopes. The land in the valley of the creek is very suitable for agriculture, and in the creek is a good supply of water. On the east side the land is not so hilly, but is dry and stony, although it consists of a good soil, which ought to produce good crops under a fair supply of rain.—*E. C. Dawson*, 1883.

- 23. Outlines.**—West, surface rolling. Soil, generally a good grey clay, from 15 to 24 inches deep; subsoil the same, hardened. A few small meadows. Grass everywhere good. The valley of Crowfoot Creek occupies most of this township, and in it are

many fine farm sites. No water in the creek, except in spring or a wet season. Excepting a few willows, there is no timber along it, but a good deal of drift coal.—*W. Ogilvie*, 1882.

Undulating prairie, with clay loam soil. In the south the surface is rougher, and the soil is both sandy and clay loam, with stones and gravel. Classes 2 and 3.—*C. F. Miles*, 1882.

Sub-division.—Very rolling. Soil (greater portion) clay loam, and class 1, with a number of locations having sandy loam. Classes 1 and 2. Most of this township is well suited for agricultural purposes. Several small creeks enter the township, the largest of which, Crowfoot Creek, courses over Sections 19, 18, 17, 16, 9, 10, 3 and 2. A coal bed exists on the west bank of this creek on Section 16.—*J. J. Burrows*, 1883.

24. *Outlines*.—North, surface rolling—sometimes flat. Some of the flats are a fair clay loam, from 12 to 18 inches deep. West, soil generally a good grey clay, from 15 to 24 inches deep. A few small meadows on both lines, and grass everywhere good.—*W. Ogilvie*, 1882.

East, rolling prairie, with a few stones. Dead Horse Lake covers Section 24, and parts of 13, 14, 23, 26 and 25. The water is muddy and shallow. This is a very fair township, being a rolling prairie with a clay loam soil.—*C. F. Miles*, 1882.

Sub-division.—Heavy-rolling prairie, except in Sections 4, 5, 6, 7 and 8 and portions of 13, 14, 23, 25 and 26. The soil is chiefly a sandy loam, of 5 to 9 inches deep, on a clay subsoil. There is but little surface water, except in Dead Horse Lake, where it is muddy and alkaline.—*J. J. Burrows*, 1883.

25. *Outlines*.—South, surface rolling. There are some flats with a fair clay loam, and a few small meadows.—*W. Ogilvie*, 1882.

Sub-division.—Heavy-rolling prairie. Soil, sandy loam, on a clay subsoil. Class 2. This township is well suited for agricultural purposes, and has an abundant supply of water. Several small lakes of good water upon Sections 3, 4, 8, 9, 14, 15, 31 and 25.—*J. J. Burrows*, 1883.

26. *Outlines*.—Comprises a portion of the Wintering Hills. The soil is a good clay loam. There are numerous sloughs, and among the hills numerous springs. Good agricultural country.—*T. R. Hewson*, 1883.

Sub-division.—Gently-rolling prairie. Soil, sandy loam, on a clay subsoil, generally class 2. Surface water in limited quantities is found in one or two small lakes, and in a few fresh-water springs.—*J. J. Burrows*, 1883.

27. *Outlines*.—Hilly and rolling country. Rosebud River crosses the line in Section 19. Timber was found in the vicinity of the river, and a little in the north-half of Section 31. Clay soil.—*T. R. Hewson*, 1883.

28. *Outlines*.—North boundary, from Red Deer River, at the north-east boundary of this township, inland, for several miles, the surface is much broken and hilly, with outcrops of coal, sandstone and carbonate of iron. West of this it is a rolling prairie, which has

a clay loam soil. Class 1, and luxuriant vegetation. In the deep ravines poplars and spruce grow from 3 to 15 inches diameter.—*T. Fawcett*, 1883.

Very much broken by the deep coulées of the Rosebud and Red Deer Rivers. There is considerable second growth timber in all the coulées. On the east boundary of Section 1 the line crosses the Rosebud River, which runs through a valley averaging about 600 feet in depth. The river at this point is about 35 feet in width, with very little running water, and gravel bottom. Clay soil.—*T. R. Hewson*, 1883.

29. Outlines.—Rolling prairie, very rough and broken in the southern part by the valley of Red Deer River, and numerous coulées and ravines draining into it. The river crosses the township from Section 18 to Section 1, in a valley from 350 to 500 feet deep, with cut clay banks. Occasional patches of spruce and small poplar clothe the slopes, and a straggling belt of poplar and cottonwood runs along the margin of the stream, which is about 8 chains wide and 6 to 8 feet deep, flowing over a bed of gravel and mud, at an average rate of about two and a-quarter miles per hour. In the northern sections the surface is more even, but the soil is everywhere a stiff clay, parched and dry, with a scanty growth of grass, and would no where rank above third class.—*L. R. Ord*, 1884.

30. Outlines.—Open, rolling prairie. A small creek follows the eastern boundary, flowing south in a valley about 30 feet deep, and one or two shallow coulées traverse the western sections. The soil is a stiff clay, with scanty vegetation, and of little value for agricultural purposes, as it would no where rank above third class.—*L. R. Ord*, 1884.

31. Outlines.—Rolling prairie, generally very dry, with a few grassy ponds towards the north line, where the land becomes more uneven. A small creek flows south through the eastern sections. Soil, clay; ranks third class.—*L. R. Ord*, 1884.

32. Outlines.—North, Sections 31, 32 and 33 are rolling; 34, 35 and 36 are hilly prairie. The soil is good. Numerous marshes were crossed—a very large one in Section 33.—*E. Bray*, 1883.

Rolling prairie, rough and uneven, with occasional small grassy ponds. The soil is clay or clay loam, ranking second and third class. A large marshy pond in Sections 18 and 19, and a lake in Sections 25 and 36.—*L. R. Ord*, 1884.

33. Outlines.—Rolling prairie, with grassy ponds, some of considerable size, often fringed with brush. The soil is a sandy loam, with clay subsoil, improving towards the north, but averaging only second class. Small scattered bluffs of poplar and willow.—*L. R. Ord*, 1884.

34. Outlines.—Rolling prairie, with small scattered bluffs of poplar and brush, and many ponds. The soil is a sandy loam, and averages second class, on account of shallow and gravelly tracts.—*L. R. Ord*, 1884.

35. Outlines.—Rolling prairie, rough and hilly, the hollows filled with ponds, frequently fringed with willow brush. Towards the

northern line the country is covered with bluffs of poplar. Soil, sandy loam, of first class quality.—*L. R. Ord*, 1884.

- 36. Outlines.**—North, hilly country, much broken by ponds and swamps. Poplar bluffs of small timber and clumps of grey willow are numerous. The soil is first class, supporting a heavy growth of grass, besides immense quantities of pea-vine.—*T. Kains*, 1883.

Rolling prairie, with bluffs of poplar and willow, generally of small size, and many ponds fringed with brush. Soil, sandy loam, with clay or gravel subsoil. First class.—*L. R. Ord*, 1884.

- 37. Outlines.**—Rolling and undulating prairie, partially wooded with poplar bluffs and clumps of grey willows. Numerous ponds fringed with willows were crossed. A large lake was crossed in Sections 6 and 7, the line in Section 7 being almost all under water. Soil, sandy loam. Second class.—*C. F. Miles*, 1884.

South, hilly country, much broken by swamps and ponds. Poplar bluffs of small timber and clumps of grey willows are numerous. A lake extends four or five miles north of the line. The soil is first class, supporting a heavy growth of grass.—*T. Kains*, 1883.

- 38. Outlines.**—Undulating and rolling prairie, with ponds and lakelets. Poplar bluffs of considerable extent, with clumps of dense grey willows. Soil, black sandy loam. First class. In Section 13 an old trail crosses the line. The supply of water in the north-easterly three miles is plentiful, but limited in the south. Section 18 is flat prairie, with alkaline depressions. A creek crosses the line in Section 31.—*C. F. Miles*, 1884.

- 39. Outlines.**—Rolling prairie, with willow and willow scrub, and numerous ponds. Soil, black sandy loam. First class.—*C. F. Miles*, 1884.

- 40. Outlines.**—North, in Section 36 the line enters Buffalo Lake, which is about twelve miles long and from two to five miles wide. The water in this lake is excellent, and abounds in large pike and suckers. On the south side of the lake the country is open prairie. The lake occupies most of the north-west of the township.—*C. A. Magrath*, 1883.

The greater part of the township lies in Buffalo Lake, a large sheet of water extending north and west; the remainder consists of hilly and rolling prairie, interspersed with numerous ponds and lakelets, fringed with willows and poplar. Soil, dark sandy loam. Second class.—*C. F. Miles*, 1884.

- 41. Outlines.**—The south half of this township is covered by Buffalo Lake. The remainder is hilly and rolling prairie, cut up by numerous deep ponds and lakelets, winding in and out amongst the hills, on the south side of which there is generally a good growth of poplar and willow, and on the north side a small prairie opening. The soil is a black sandy loam, with sandy subsoil—nevertheless—covered by a luxuriant growth of grasses, vetches and pea-vines. The water, generally, contained in the ponds, is more or less alkaline. Second class.—*C. F. Miles*, 1884.

42. Outlines.—Rolling and undulating, cut up by numerous deep ponds and lakelets, and covered thickly with bluffs of poplar, up to 12 inches in diameter. Along the most northerly tier of sections there is a fine stretch of undulating and slightly-rolling prairie, which is superior to the remainder of the township. Soil, black sandy loam. Second class, with the exception of the northerly part, which may be rated as first class.—*C. F. Miles*, 1884.

43. Outlines.—Rolling prairie, with bluffs of small poplar and willow, which become more scattered towards the south. Meeting Creek crosses the township, flowing east, in a broad and shallow depression. The timber is of no value. The soil, everywhere, is excellent, being of a rich black loam, 12 to 18 inches deep, with clay and clay loam subsoil, except in the valley of the creek, where some patches of boulder-strewn land occur.—*L. R. Ord*, 1883.

44. Outlines.—North, rolling and undulating. The land is of first class quality, with occasional patches of stone and gravel. Thick willow and grass swamps are dotted over the country; also, a few scattered bluffs of small poplar, very dense in places. The surface rises towards the middle of the township, and then as gradually falls again.—*T. Kains*, 1882.

Rolling land, wooded in the western sections with small poplar and willow; towards the east line more open patches are seen, the country rolls more heavily, and is dotted with numerous lakes and ponds. The timber, as a rule, is small, and of little value, but the soil is of good quality, being a black mould, averaging 12 inches deep, with clay and sandy loam subsoil, but generally the former.—*L. R. Ord*, 1883.

45. Outlines.—West, undulating country, with poplars, willows, ponds and swamps. Soil is class 1. A creek, flowing in a south-easterly direction, crosses the line in Section 30. The soil is first-class, occasionally mixed with patches of stone and gravel.—*T. Kains*, 1883.

East, the Battle River runs in a south-easterly direction, almost diagonally across the township. A few miles from the western boundary it expands into a lake about half a mile wide, which extends for many miles. To the south of the river the land is high and undulating, with scattered bluffs of poplar and willows. Soil, first class. North of the river the township is slightly undulating and thickly interspersed with poplar bluffs and many small swamps. Soil, first class.—*J. J. McArthur*, 1883.

Sub-division.—Rolling land and fair quality of soil, the greater portion covered with scrub and occasional bluffs of poplar and high willow. The alluvial soil varies from 6 to 15 inches, on a clay subsoil. A portion of Dried Meat Lake—through which Battle River flows—crosses the township in a north-westerly and south-easterly direction. The banks of the lake are about 100 feet high, and thickly wooded on the west side. Surface water abundant.—*W. Beatty*, 1883.

- 46. Outlines.**—West, slightly-undulating, with poplar and willow bluffs. Soil is class 1. Cart trails were crossed in the north and south halves of Section 6, and the Battle River in the south half of 7.—*T. Kains*, 1883.

The eastern part is traversed by a creek running south into Battle River. The remainder is interspersed with poplar bluffs and small swamps. Soil, first class.—*J. J. McArthur*, 1883.

Sub-division.—About one half of the area of the township is covered with poplar ; but it is in bluffs, excepting in the northern part, where there are intervening patches of scrub and willow in a poplar forest. The Battle River passes through the south-west part of the township. The soil, generally, is good.—*D. Beatty*, 1883.

- 47. Outlines.**—In the interior are several large marshes. The Pretty Hills are situate in the north-west part. A creek, flowing south to Battle River, runs through the eastern part of the township. Poplar bluffs are scattered throughout. Soil, first class.—*J. J. McArthur*, 1883.

- 48. Outlines.**—North, timber and scrub. Numerous ponds and marshes.—*C. A. Magrath*, 1883.

The south half is broken by small lakes and marshes. In the north half, through which the Battleford trail runs, there is much poplar bush. The country is undulating, with many swamps. Soil, first class.—*J. J. McArthur*, 1883.

- 49. Outlines.** Is entirely in the Beaver Hills, and is much broken by muskegs, ponds and lakes, some of which are of large area. The timber is poplar, from 2 to 10 inches in diameter, with a fair sprinkling of small birch. Spruce was noticed in the vicinity of some of the larger lakes, but not in large quantities. The soil is of a sandy nature, with an inch or two of vegetable mould lying on the surface. It has been classed three, on account of the numerous muskegs and its generally broken surface.—*T. Kains*, 1884.

- 50. Outlines.**—Is entirely in the Beaver Hills, and consists of rolling to undulating country, timbered with a dense growth of small poplar and birch. Spruce occurs in patches on the borders of the numerous muskegs which abound in this country ; but no large belts of this timber were noticed. The poplar and birch timber varies from 1 to 3 inches diameter, but stands so closely together that quite a great deal of extra cutting had to be done in order to produce the lines carefully. The soil is of fair quality, but the country is so much broken by ponds and muskegs that it has been classified 2 and 3.—*T. Kains*, 1884.

- 53. Sub-division.**—This township is heavily timbered with poplar and some spruce. The soil, generally, is poor, and class 3. There are several large lakes and a number of smaller ones, besides swamps and muskegs.—*G. A. Simpson*, 1883.

- 54. Sub-division.**—Very hilly, and covered with small poplar and willows, with much fallen timber. Soil, sandy ; numerous lakes,

muskegs and beaver ponds. A large lake—with islands thereon—occupies portions of Sections 14, 15, 22, 23, 26 and 27.—*G. A. Simpson, 1883.*

- 55. Sub-division.**—The Beaver Hills extend from the north about three miles into this township, and along their base the ground is very wet and swampy. The soil, generally, is of a light character. The whole township is timbered with poplar and, in places, covered with dense willows. The Saskatchewan and Beaver Lake trail crosses the township.—*D. Beatty, 1882-83.*
- 56. Sub-division.**—Timbered with small poplar and dense scrub and willows, with pitch pine and scattered spruce and tamarac in the north-west. The soil is generally light, and in the north-western sections sandhills occur. Beaver Creek enters in Section 1 and passes out in Section 32.—*D. Beatty, 1882-83.*
- 57. Sub-division.**—The Victoria trail crosses the township. Timbered, principally, with poplar, of an average size of 6 inches in diameter, with a thick underbrush of scrub, and in many places a dense growth of willows. The Saskatchewan River passes diagonally across the township from Section 6 to 36. The greater portion of the township—owing to the bend of the river course—lies to the north-west, and is light and sandy. The soil on the south-east is much better.—*D. Beatty, 1882-83.*
- 58. Outlines.**—Slightly undulating country, almost covered with small poplar and willows, and on the west side of the range, and in the vicinity of the Saskatchewan River, clumps of spruce exist. The river enters the township in Section 1, and runs due north for over four miles, when it suddenly bends toward the east. Sucker Creek enters the river near where it turns to the east. Muskegs and swamps are numerous, especially near the west side of the range. The Edmonton and Battleford trail keeps within a short distance of the river throughout the township. Soil, second and third class.—*T. Kains, 1884.*
- South; poplar, willow, tamarac, spruce and pitch pine. A few sandhills. Line crosses the Saskatchewan River in Section 1, and the trail to the Victoria Settlement in 2. Marshes were crossed in Sections 5 and 6.—*D. Beatty, 1883.*
- 59. Outlines.**—Is generally undulating throughout, and densely wooded with 3 to 7-inch poplar and high grey willows. Scattered here and there are spruce trees from 5 to 12 inches in diameter. The more southerly portions are not so densely timbered, and might be classed as bluffy country. There is considerable fallen timber. There are no large bodies of water, but it is well watered and drained by small lakes and creeks. The subsoil consists of a stiff clay throughout. This is overlaid in the east by about 7 inches of black loam, and in the west by about 5 inches of clay loam.—*C. A. Magrath, 1884.*
- 60. Outlines.**—The northern portion is, for the most part, one large muskeg, densely timbered with tamarac from 4 to 10 inches in diameter, and spruce from 5 to 15 inches in diameter. Here and there may be found an occasional knoll, wooded with 4 to 8-inch

poplar and high grey willows, with fallen timber. This portion is watered by a few small, deep lakes, and drained by small creeks. The country rises gradually to the south, where it assumes an undulating character. In this portion the wood consists of 3 to 7-inch poplar and high grey willows, with burnt and fallen timber. There is also some scattered spruce in this portion of the township. There are no trails. The township is not well suited for agricultural purposes.—*C. A. Magrath, 1884.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XXI.

5. *Outlines.*—Undulating and level prairie. West, the soil is clay loam, and east it is sandy loam, in many places mixed with gravel. The south-eastern half is greatly cut up with coulées, in most of which are small ponds. A tributary of Pot-hole River crosses the township.—*C. E. Wolff*, 1883.

South, rolling prairie; excellent pasture. Numerous coulées were crossed, and in Section 3 a creek flowing north.—*O. J. Klotz*, 1883.

6. *Outlines.*—North, undulating and rolling prairie. Soil, good sandy loam. Sections 32 and 33 are broken by Pot-hole River and valley. The Fort Benton, U.S., trail crosses the line in Section 36, and a tributary of Pot-hole River in Section 35.—*C. A. Bigger*, 1884.

West, undulating and level prairie. Soil, clay loam. Pot-hole River flows north, within a mile east of the line, at the bottom of a deep gulch. Water was lying in ponds in it at the time of survey (6th July). Eastwards the soil is a sandy loam, in many places mixed with gravel.—*C. E. Wolff*, 1883.

7. *Outlines.*—North, undulating and rolling prairie. Soil, a good sandy loam. A trail was crossed in Section 33, and the Fort Walsh trail in 35.—*J. Warren*, 1883.

West, rolling prairie, with a sandy clay soil over clay. On Sections 19, 18 and 7 is St. Mary's River, which has a very rapid current. It lies in a valley 250 feet below the prairie level. There are some rich seams of coal cropping out along its banks. East, undulating country. Soil, clay loam, with clay subsoil.—*C. E. Wolff*, 1883.

Sub-division.—There is a great deal of waste land in this township. St. Mary's River, in the westerly tier of sections, and Pot-hole Creek in the interior, with their numerous coulées intersecting the township in every direction, make it a good township for grazing purposes. There is some excellent soil in the south-east part, and the whole township supports an excellent growth of grass, especially in the bottom lands. An excellent seam of lignite coal is exposed on the south bank of St. Mary's River, in Section 7, and crosses to the north bank. Water is abundant at all seasons.—*C. A. Bigger*, 1884.

8. *Outlines.*—North and east, sandy loam. West, clay loam. All rolling surface. Belly River crosses Sections 18 and 19. Trail to Medicine Hat crosses from Section 2 to 31. In the vicinity of the river the country is broken by deep ravines. The trail to Fort Walsh crosses the south half of Section 1.—*F. W. Armstrong*, 1883.

Sub-division.—Gently-undulating, but not hilly. The western

portion is somewhat broken by ravines running into the valley of the Belly River, which forms a bow upon Sections 18 and 19, and possesses similar features to those described in Township 9 of this range. The soil of the township is a clay loam of 3 to 5 inches deep, and inclined to dryness. There are some better sections in the centre of the township.—*J. Warren, 1883.*

Outlines.—South, east and west is very high and dry rolling land. Soil, sandy loam. The western part is very much broken by the deep coulées adjoining the Belly River, which flows north, just west of the township, and then comes in on Sections 30 and 31.—*F. W. Armstrong, 1883.*

Sub-division.—Mostly level or gently-undulating, except in the north-west, which is very much broken by the ravines running to the valley of the Belly River, which crosses the township on the two north-westerly sections. The river is shallow in places, but with a strong current; is about 400 to 600 feet wide; has high banks, precipitous in places, and of hard, dark clay, with occasional small scrubby trees on the flats. The soil of the township is a dry clay loam, of shallow depth.—*J. Warren, 1883.*

- 10.** *Outlines.*—Is a dry, rolling prairie. Soil, a light sandy loam. It is one mass of coulées and river bottoms. The Belly River flows in a valley, which is about half a mile broad, and with banks about 300 feet high. Coal crops out in numbers of places along the banks.—*F. W. Armstrong, 1883.*

Sub-division.—For agricultural purposes, this township is of very little value; but as a ranche for stock it cannot be excelled. Belly River enters on Section 1 and passes out on Section 24, after an exceedingly tortuous course. The banks are high, and numerous coulées extend far inland, forming many sheltered valleys for stock during inclement weather, so that it will be a good wintering spot for cattle. There is a good grove of cottonwood in Section 1.—*C. A. Bigger, 1884.*

- 11.** *Outlines.*—Is a very dry rolling prairie. The soil is a light sandy loam, with surface stone in the west and a grey clay soil in the east.—*F. W. Armstrong, 1883.*

Sub-division.—Either dry, rolling, level or gently sloping prairie; very good for agricultural purposes, being entirely composed of a good loam and clay. There is no surface water, except a few small sloughs, and in Section 27 a nice mineral water spring—Black Spring—where the water is good and abundant. There is a good belt of grazing land around this spring. No wood.—*J. W. D'Amours, 1883.*

- 12.** *Outlines.*—The three north-easterly sections are rolling. Section 33 is higher country, and in Section 32 the Rocky Mountains are first visible. Soil, sandy loam.—*C. A. Magrath, 1882.*

West and east is a rolling prairie. Soil, light sandy loam in the west and grey clay eastwards. Black Spring Ridge was crossed in Sections 6, 7 and 18. Small creeks in 19 and 31, and a couple of small marshes in 30. Small creeks also cross 12 and 25.—*F. W. Armstrong, 1883.*

Sub-division.—Generally rolling prairie throughout the township, with soils of loam and sandy loam on a clay sub-soil, classes 1 and 2, the latter class being a little stony, but chiefly confined to the eastern half of the township. There is no wood and no surface water.—*J. W. D'Amours*, 1883.

- 13. Outlines.**—North and west is a rolling prairie, but rough and broken on its eastern portion. It forms part of the range of hills known as the Black Spring Ridge. The grass is short, and the water scarce.—*F. W. Armstrong*, 1883.

East, the first four southerly sections are rolling; then the remaining two become hilly. This boundary approaches within 60 chains of the Little Bow River.—*C. A. Magrath*, 1882.

Sub-division.—The western half is rolling prairie, and the eastern irregularly hilly. The soil on the hill tops and slopes is stony and gravelly, with scant vegetation. The bottom soil is a sandy loam on a clay subsoil, supports a fair crop of grass, and contains numerous small ponds in spring time, but which dry up as the summer advances. No wood.—*J. F. Snow*, 1883.

- 14. Outlines.**—Rolling prairie. The grass is short. Very much broken on the north by deep ravines running into the valley of Little Bow River, the banks of which here are very high and steep.—*F. W. Armstrong*, 1883.

Section 1 is hilly and 12 and 13 are cut up by coulées running in a north-easterly direction into the valley of the Little Bow River. In Section 24 the valley of the same river is entered; and the remaining sections—25 and 36—are rolling. Soil, sandy loam.—*C. A. Margrath*, 1882.

Sub-division.—Very much broken by the valley of the Little Bow River and the numerous ravines leading thereto on either side. The river enters by Section 32 and crosses over 29, 33, 28, 34, 27, 26, 23 and 24, rendering these sections almost useless. The valley soil is very poor, being the subsoil wash from the hillsides. The southern and western portions of the township are rolling, with a soil of sandy loam on a clay subsoil—class 2—and well adapted for grazing. No wood, and no surface water beyond the river.—*J. F. Snow*, 1883.

- 15. Outlines.**—Is divided in two by Snake Valley. It is very rough and broken. The soil is a grey clay, with surface stone. The water is very scarce. There are some good hay marshes in the valley.—*F. W. Armstrong*, 1883.

East, is dry, rolling prairie, with good soil.—*O. J. Klotz*, 1882.

Sub-division.—The Snake Valley crosses this township. The banks of the valley are very much broken by ravines and deep coulées which run into it from both sides. The sides appear, from the nature of the soil, to be disintegrating at a rapid rate, and are at present about 100 feet high. At the time of survey (June) there was little water in the valley. The Little Bow River crossing the south-west corner—is a small stream of clear water. There is some fair land in the south and west, near the boundaries; but the township is better suited for grazing. There are

indications of coal deposits in the valley. No wood.—*S. L. Brabazon*, 1883.

- 16. Outlines.**—South and west, very rough and broken. The soil is a grey clay, with surface stone. The water is very scarce. There are some good hay marshes in the valleys.—*F. W. Armstrong*, 1883.

North, is dry, undulating prairie, of fair soil. About the centre of this range is a valley running north and south, which is undoubtedly one sheet of water in the spring. The east is dry, rolling prairie, which, at the southern part of this township, reaches the height of land between the north and south.—*O. J. Klotz*, 1882.

Sub-division.—Snake Valley runs almost due north and south through this township, but it is not so deep, the banks are not so steep and precipitous, nor does it break up the adjoining land like Township 15 of this range. There is also to be found in it a more luxuriant crop of grass and damper soil, and the cattle would find in it good feed, good shelter and a sufficiency of water. Throughout the remainder of the township the advantages offered to the agriculturist are small, owing to its broken and hilly nature. No wood.—*S. L. Brabazon*, 1883.

- 17. Outlines.**—West, open, rolling prairie. Soil, class 2; gravelly and stony on hill tops. No water.—*L. R. Ord*, 1882.

East, is undulating prairie, till toward the northern part where it becomes rolling, and some water in marshes occurs.—*O. J. Klotz*, 1882.

Sub-division.—Snake Valley runs almost due north and south. It becomes shallower and possesses less rugged features than in the southern townships. It is marshy, but is likely dry by the 1st of August. A creek enters from Section 32 and loses itself in the marsh. The description given of Township 16 of this range will answer for this township also. The soil is, however, not below class 2. There is no wood.—*S. L. Brabazon*, 1883.

- 18. Outlines.**—North and west, open, rolling prairie, with a second class sandy loam soil. No water northwards, but a large shallow marsh covers the central west.—*L. R. Ord*, 1882.

East, especially good is the soil in the southern part of this township, and fairly watered with ponds and marshes.—*O. J. Klotz*, 1882.

Sub-division.—There is some good land in the south-western portion, but elsewhere it is very rough and uneven. The soil between the hills is good, and there is abundance of grass and sufficient water to make it valuable as a cattle run; but it is not a desirable place for cultivation while better places are not filled up. No wood. Sections 7, 18 and 19 are covered with a large marsh.—*S. L. Brabazon*, 1883.

- 19. Outlines.**—West, rich land; clay loam subsoil. The trail from McLeod to Blackfoot Crossing crosses Section 31. No water directly on this line, but a few shallow and muddy ponds in the township, and a large shallow, alkaline lake in the western centre.—*L. R. Ord*, 1882.

East, prairie, with high-rolling hills. No water.—*T. Drummond*, 1882.

Sub-division.—A large portion of the land in this township is of small value. Rattlesnake Lake, which lies in the interior of the western part, covers a large tract of land, while a still larger tract is subject to overflowing in wet seasons, owing to its being almost level with the lake. The eastern part of the township is rolling land, of a fairly good soil.—*C. A. Bigger*, 1884.

- 21. Outlines**.—Rolling prairie. The line of the Canadian Pacific Railway was crossed in Section 33. West of this is the Blackfoot Indian Reserve. Country along the line is dry.—*J. J. Burrows*, 1883.

Sub-division.—Rolling prairie. Soil, black earth, 12 inches deep, on sandy loam subsoil, and very good for agricultural purposes. Is a fractional township, and immediately north of the Indian Reserve. The Canadian Pacific Railway crosses this township, and has Cluny Station located here.—*E. C. Dawson*, 1883.

- 22. Outlines**.—West, Section 6 and part of 7 are in the Blackfoot Indian Reserve. Dry and rolling country. Canadian Pacific Railway and a trail cross the line in the south half of Section 7.—*T. R. Hewson*, 1883.

East, as far as Section 18 the land is second class; the remainder may be marked as first class.—*T. Drummond*, 1882.

Sub-division.—Rolling prairie. Soil, mostly a deep black clay loam on a clay subsoil, and well suited for agricultural purposes. There are two excellent springs of water on Section 25. The Canadian Pacific Railway crosses the south-west from Section 4. About a quarter of Section 5, and almost all of Section 6, are in the Blackfoot Indian Reserve.—*J. J. Burrows*, 1883.

- 23. Outlines**.—West; rolling prairie. An alkaline creek, with cut banks, was crossed five times in the south half of Section 19. Crowfoot Creek, flowing in an alkaline flat bottom, crosses the line in Section 31.—*T. R. Hewson*, 1883.

East, surface rolling. Soil generally a good grey clay from 15 to 24 inches deep; subsoil the same, hardened. A few small meadows; grass everywhere good.—*W. Ogilvie*, 1882.

Sub-division.—Rolling prairie, with several small creeks running through it, the largest of which are the Crowfoot and Little Crowfoot. The former runs through Sections 31, 29, 28, 21, 22, 27, 33 and 24, and the latter through 34, 35 and 36, emptying into the former, which has also several other smaller creek tributaries. The soil is a deep clay loam, well adapted for agriculture.—*J. J. Burrows*, 1883.

- 24. Outlines**.—North and east, surface rolling. Soil, generally a good grey clay, from 15 to 24 inches deep; subsoil the same. A few small meadows; grass everywhere good.—*W. Ogilvie*, 1882.

West, rolling country. A creek, in an alkaline flat bottom, crosses the line twice in Section 6.—*T. R. Hewson*, 1883.

Sub-division.—Gently-rolling, and well adapted for settlement. It is well watered by several creeks, the largest of which

is the Little Crowfoot Creek which runs south-easterly through Sections 31, 32, 29, 20, 21, 16, 15, 10 and 3. The soil is a black clay loam on a clay subsoil. Class 1.—*J. J. Burrows*, 1883.

- 25.** *Outlines.*—South, rolling prairie. Clay loam soil. No water, creeks being dry.—*W. Ogilvie*, 1884.

Sub-division.—South and east it is gently-rolling prairie, while the north-west quarter is more rolling, with places inclined to be hilly. The soil is a sandy loam on a clay subsoil. Class 2. In the north-west quarter the soil is a shade lighter, with a more gravelly subsoil. Several fresh water springs were found, and also many small ponds, the largest of which are situate on Sections 1, 2, 11 and 12, and on Section 36.—*J. J. Burrows*, 1883.

- 26.** *Sub-division.*—Heavy-rolling, and well supplied with water. Soil, a sandy loam on a clay subsoil. Class 2. Many fresh-water springs occur, a few small creeks and five small lakes. Coal abounds in Sections 19, 20, 29 and 30.—*J. J. Burrows*, 1883.

- 27.** *Outlines.*—Hilly country, traversed by the Rosebud River. Soil, of first class character. The soil south of the river is principally heavy clay, but not so much so as that to the north. Good agricultural country. A creek crossing Sections 6 and 7, flows north and joins the Rosebud River, which crosses the west line in 7 and 18. Wood was found in the vicinity of the river and creek.—*T. R. Hewson*, 1883.

- 28.** *Outlines.*—North, rolling prairie. Soil, clay loam. Class 1. Scattered poplar bluffs, luxuriant grasses and rich vegetation. Water in creeks good.—*T. Fawcett*, 1883.

Rolling prairie. On the eastern boundary of Section 1 is a creek, in the valley of which there is spruce and second growth poplar. Soil is sandy loam of first class character. Thin seams of coal may be traced along the banks of the creek aforesaid. Good agricultural country.—*T. R. Hewson*, 1883.

- 29.** *Outlines.*—Rolling prairie. Red Deer River crosses the township from Section 34 to Section 13, and is joined by a stream which flows from Section 7 to Section 23. This stream, as well as the main river, runs in a valley 300 feet deep, with banks, in many places, nearly perpendicular, which, with numerous ravines and coulées, make the surface very irregular. Poplar and spruce appear on some of the slopes, and belts of poplar and brush fringe the stream. A marshy pond crosses the western line in Section 18, and this is the only water on the highlands of the township. There is some fair soil in the southern sections, but over the remainder the soil is a stiff clay, which, with the broken nature of the surface will make the township comparatively valueless for agriculture. It would hardly average above fourth class.—*L. R. Ord*, 1884.

- 30.** *Outlines.*—Rolling prairie, traversed by Red Deer River, from Sections 34 to 2 and by a stream which joins it from the west in Section 3. Both these flow in valleys upwards of 300 feet deep, with nearly perpendicular banks, bare of timber, except a narrow belt along the water's edge. Numerous deep ravines dis-

charge into these valleys, making the surface very uneven. Soil, a stiff clay, ranking third and fourth class.—*L. R. Ord*, 1884.

- 31. Outlines.**—Rolling prairie, cut up by the valley of Red Deer River from Section 32 to Section 3, and numerous ravines discharging into it. Northwards, the banks become more precipitous, being in many places nearly perpendicular. Timber was found in many of the ravines, and along the river side in small quantities. Soil, a stiff clay, averaging third to fourth class.—*L. R. Ord*, 1884.

- 32. Outlines.**—North; rolling prairie; rich soil. Red Deer River crosses the line in Section 31. Along the line a couple of marshes were crossed.—*E. Bray*, 1883.

Very rough, and broken in the western sections by numerous ravines and by the Red Deer valley, which crosses from Section 31 to Sections 4-5. The valley is some 400 feet deep and about a mile wide, wooded along the margin of the river and in some of the coulées. The only arable land is in the eastern half of the township, where the soil is a clay loam, with a clay subsoil. Average, class 4.—*L. R. Ord*, 1884.

- 33. Outlines.**—Rolling prairie, with small scattered bluffs of young poplar and willow, and a few ponds and lakelets, generally fringed with brush. The soil is fair, improving towards the north—a sandy loam, with clay loam subsoil—first class. Red Deer River crosses Section 6. In the vicinity of the river willow, poplar and cherry brush were found.—*L. R. Ord*, 1884.

- 34. Outlines.**—Rolling prairie, broken by Red Deer River and its ravines, which cut up the north-western half of the township. Patches of spruce and poplar clothe many of the slopes and the margin of the stream, and small bluffs of young poplar and occasional ponds dot the uplands. The soil is generally shallow and gravelly, though good tracts occur, and the township ranks second and fourth class.—*L. R. Ord*, 1884.

- 35. Outlines.**—Rolling prairie, broken by Red Deer River, which divides the township nearly in halves, flowing from Sections 31-32 to 2-3 in a valley some 400 feet deep, and wooded with poplar and spruce. East of the valley the country is rough and hilly, with numerous ponds and thick bluffs of poplar. The surface of the western part is similar, but the wood is smaller. Soil, first class.—*L. R. Ord*, 1884.

- 36. Outlines.**—North, very hilly and much broken by ponds, which are very deep, and are fringed with a dense growth of poplar and willows. At the centre of the range the land falls slightly towards the Red Deer River, and is almost covered with small poplar and willows. The soil is first class, supporting a heavy growth of grass, besides immense quantities of peavine.—*T. Kains*, 1883.

Rolling prairie, very rough and hilly, and wooded with thick and numerous bluffs of poplar. Most of the hollows contain deep ponds, fringed with brush. The soil is deep and rich, and vegetation luxuriant. A sandy loam; first class in quality. Red Deer

River crosses the west line in Section 18, and Sections 6 and 7 are broken by the banks of the river and the coulées running into them.—*L. R. Ord*, 1884.

- 37. Outlines.**—The greater or south-west part consists principally of high-rolling and hilly country, with extensive bluffs of poplar and grey willows—fire-killed in many places—and numerous ponds. Soil, generally black sandy loam. The lesser, or north-east part, is rolling and undulating prairie, partially wooded with poplar and willows. Numerous ponds occur. Soil, black sand and clay loam. Second class. Part of a lake about three or four miles long lies in the south-east corner.—*C. F. Miles*, 1884.
- 38. Outlines.**—The west half is rolling prairie, with numerous ponds and bluffs of poplar, with grey willows. The east half is flat prairie, with alkaline marshes draining north-westerly, by a small stream, into Tail Creek. Soil, sandy loam. First class.—*C. F. Miles*, 1884.
- 39. Outlines.**—Rolling prairie, with numerous ponds, grey willows and poplar bluffs. Soil, principally, sandy loam on a sandy subsoil. Second class. An arm of Buffalo Lake extends to the north-west corner. There is a creek in the south half and an old cart trail in the north half of Section 6. Another trail, running on the north side of a large lake, was crossed in the south half of 30.—*C. F. Miles*, 1884.
- 40. Outlines.**—North, in Section 34 the line leaves Buffalo Lake. In this broken range the country is undulating and covered with small poplar and willow scrub. Soil, first class.—*C. A. Magrath*, 1883.
- The greater part of this township lies in Buffalo Lake, a large sheet of water extending over three ranges and part of two townships. The south-east corner is a rolling and hilly prairie, interspersed with ponds, fringed with poplar and willows. Soil, sandy loam. Second class. The north-west corner is an undulating prairie, broken by numerous ponds, with some bluffs of poplar and willows. Soil, sandy loam. Second class.—*C. F. Miles*, 1883.
- 41. Outlines.**—An arm of Buffalo Lake divides this township into the south-west and north-east parts. The south-east part is principally high-rolling country, with a second growth of poplar and willows. The north-east part is more open, but cut up by numerous ponds and lakelets, fringed with poplar and willows. The soil adjoining the lake is generally light, with sandy subsoil. Soil, sandy loam. The cart trail around Buffalo Lake, and a creek, were crossed in Section 19. An old trail in 18, and a marsh and a lake in 31.—*C. F. Miles*, 1884.
- 42. Outlines.**—Rolling and hilly, cut up by numerous ponds and lakelets, and poplar bluffs of considerable extent. Berry bushes of every variety, indigenous to this country, are very profuse in growth, including the wild cherry, choke-cherry, saskatoon, high bush cranberries, goose and raspberries. An old trail from Todd's

Crossing runs south-easterly through this township. Soil, sandy loam. Second class.—*C. F. Miles*, 1884.

- 43. Outlines.**—Rolling land, generally prairie, with bluffs of willow and poplar of small sizes. Red Deer Lake crosses the south-western corner of the township, and extends north-west several miles. Beaver Lake, drained by Meeting Creek, crosses the north boundary. The land is excellent, and well fitted for agriculture, the only drawback being that little of the poplar is large enough for building purposes. A few stretches of boulder-strewn lands occur, but the greater part of the soil is a rich black loam, 12 to 15 inches deep, with clay loam and, in places, gravelly subsoil.—*L. R. Ord*, 1883.

- 44. Outlines.**—North, rolling and undulating in long slopes. The land is of first class quality, although occasional patches of stone and gravel were noticed. Thick willows and grass swamps are dotted over the country, while there are a few scattered bluffs of small poplar, very dense in places.—*T. Kains*, 1883.

The western portion lies in the Beaver Hills, and is rough and hilly, and well wooded, with numerous lakes. The eastern half is more open, and not so uneven, but covered, in great part, with young willow and poplar, nearly all the timber being too small for use. The soil is excellent—a rich black loam, 15 to 18 inches deep, with sandy loam subsoil.—*L. R. Ord*, 1883.

- 45. Outlines.**—West, high and rolling, and more or less overgrown with willow scrub. Swamps are very numerous. There are poplar bluffs scattered throughout. Soil, first class.—*J. J. McArthur*, 1883.

East and south, undulating country, with poplars, willows, ponds and swamps. Soil is class 1. A creek, flowing in a south-easterly direction, crosses the line in Section 25.—*T. Kains*, 1883.

Sub-division.—Undulating, and covered with alternate patches of scrubby prairie and bluffs of high willow and poplar. There are numerous small ponds, hay swamps and marshes. The soil is rich black earth on a clay subsoil.—*W. Beatty*, 1883.

- 46. Outlines.**—West, the Battle River runs east through the south half of this township. The south side of the valley is well wooded with spruce. The part of this township to the north of the river is thickly interspersed with bluffs of poplar. The land is excellent. Section 31 is submerged by Bittern Lake, and other lakes and marshes were crossed. Trail to Peace Hills crosses Section 19.—*J. J. McArthur*, 1883.

East boundary, first class land. Undulating, and contains ponds, swamps and willow clumps, which become thicker on the north side of Battle River. This stream, running in an easterly direction, was crossed in Section 7. At this point it is about 80 feet wide, and runs in the bottom of a valley one-half mile wide and from 80 to 90 feet below the surface of the adjoining country. Some very fine spruce timber was growing on the south bank of the river. The direct trail from Red Deer Forks to Edmonton crosses the river near the meridian. A number of half-breed

settlers have been located in the vicinity for a number of years.—*T. Kains, 1883.*

Sub-division.—One-third of the township is timbered with poplar, but it is scattered throughout in bluffs, intermingling with scrub and heavy willows. There is very little open prairie. The soil is generally good. The Battle River crosses the township from Section 18 to Section 12. A large lake was crossed in Sections 35 and 36, and all of 31 and part of 32 is submerged by Bittern Lake. Marshes numerous.—*D. Beatty, 1883.*

47. Outlines.—A large part of the western half of this township is covered by Bittern Lake (alkaline). From the lake the land rises gradually for about two miles, and then becomes hilly, and broken by small ponds. The slope from the lake is thickly interspersed with poplar bluffs and prairie openings. The soil in this part cannot be surpassed. In the remainder the soil is good, although alkali is noticeable in low spots.—*J. J. McArthur, 1883.*

48. Outlines.—North, timber all along this line. Section 35 is almost entirely submerged by a large lake. Little Hay Lake covers the greater part of Section 32 and about half of 33. Trail to Battle River was crossed in Section 32, and the telegraph line in 31.—*C. A. Magrath, 1883.*

The north-west part is heavily timbered with poplar, and poplar bluffs are scattered throughout the remainder. A creek running south from Little Hay Lake to Battle River traverses the east half. The country is rolling, with first class soil. The trails from Battle River Settlement, and from Battleford to Edmonton, join about the centre.—*J. J. McArthur, 1883.*

49. Outlines.—The south-west one-quarter is rather open country, broken by lakes and ponds, and thickly dotted with poplar bluffs and large sized willow clumps. The telegraph line is located through the extreme south-west corner, and the Hay Lakes trail traverses that part of the township also. Heavy poplar timber, with small birch and some spruce, cover the balance of the township. There are some large sheets of water here, along the margin of which some spruce was noticed. Muskegs numerous. The soil ranks second and third class.—*T. Kains, 1884.*

50. Outlines.—Hilly country, much broken by ponds and lakes, around which a fair amount of good spruce was noticed. The timber is much heavier at the west side of the range than it is at the east, probably on account of the westerly portion being much broken by large sheets of water. This township is altogether in the Beaver Hills, and is class 3.—*T. Kains, 1884.*

53. Sub-division.—Lies in the Beaver Hills. Is wooded with large and small poplar, fallen timber, grey willow and scrub. There is not much surface water, and the soil is very light.—*G. A. Simpson, 1883.*

54. Sub-division.—Lies in the northern part of the Beaver Hills. The surface is much broken by muskegs and beaver ponds, and is composed of a light sandy soil. It is timbered with small and

heavy poplar, spruce, birch, grey willows and fallen timber. A creek in Section 13, and in 36 two more.—*G. A. Simpson*, 1883.

55. Sub-division.—Much broken up by swamps and muskegs. The higher lands are timbered with poplar and, in places, with dense willows. The soil, generally, is good, although in the east somewhat light. Two creeks cross the line in Section 1, two in 12 and one in 36, and in the latter the Saskatchewan and Beaver Lake trail. The Battleford road was crossed in Section 7, and the Saskatchewan River in Section 31.—*D. Beatty*, 1883.

56. Sub-division.—The greater part is thickly timbered with poplar, with dense underbrush. There are about 3,000 acres in the centre of the township timbered with pitch pine and scrub poplar. The soil is light and sandy. The Saskatchewan River enters the township at the south-west corner and passes diagonally in a north-easterly course through it. There are many small and large marshes. The Victoria trail crosses the township.—*D. Beatty*, 1882.

57. Sub-division.—Is thickly timbered with poplar, averaging about 6 inches in diameter, with the exception of a narrow belt of pitch pine along the east boundary, and a few scrub tamarac swamps and muskegs. Soil, light and sandy. Red Water Creek crosses the township.—*D. Beatty*, 1882.

58. Outlines.—Country is rather level. Thick poplar, willow and scattered clumps of spruce are growing everywhere. Around the numerous swamps and in the vicinity of the low lands willows grow to a great size.—*T. Kains*, 1884.

South, poplar, willow, dead and fallen timber and willow bush. Marshes were crossed in every section along this line, and the Vermillion River in the west half of Section 6.—*D. Beatty*, 1882.

59. Outlines.—Undulating country, with marshes. Poplars, willows, and some pine. A creek was crossed in Section 13. A creek and two pack trails cross the line in Section 24.—*C. A. Magrath*, 1884.

60. Outlines.—Marshes and muskegs. Poplar, spruce and tamarac. A pack trail was crossed in Section 24. The north half of Section 36 is a large muskeg.—*C. A. Magrath*, 1884.

TOWNSHIPS WEST OF THE FOURTH INITIAL MERIDIAN.

RANGE XXII.

5. *Outlines.*—Undulating and level prairie. Soil, clay loam. Pot-hole Creek flows north-easterly through this township, passing out at the north-east corner of Section 36.—*C. E. Wolff*, 1883.
- South, undulating prairie, with good soil and good grass. Pot-hole Creek was crossed in Section 34. Country broken in places by coulées and ravines.—*O. J. Klotz*, 1883.
6. *Outlines.*—Undulating and level prairie. Soil, clay loam. Pot-hole Creek flows northward, at the south-east corner, and St. Mary's River crosses the north-east quarter by an exceedingly winding course.—*C. E. Wolff*, 1883.
7. *Outlines.*—All west of St. Mary's River is in an Indian Reserve. The portion available for settlement comprises two small corners, one at the north-east and the other at the south-east.—*C. E. Wolff*, 1883.
8. *Outlines.*—North, rolling land, with a sandy loam soil. Line crosses a trail in Section 33, and the Belly River in the west half of 36. The Coal Banks Shaft is situated just north of the line, a few chains north-west of the quarter-section post, on the north boundary of Section 35. Timber was found in Sections 31 and 36, in the vicinity of the Belly River. East, the surface is undulating. Soil, clay loam. Belly River crosses and re-crosses the line, and deep ravines run to the valley of the river.—*F. W. Armstrong*, 1883.

Sub-division.—The Belly River crosses this township by a very circuitous and meandering route. The banks of the river are high, rugged and precipitous, with an occasional margin or flat of bottom land between these banks and the river. The soil of the township appears to be a good clay loam, and should class 1; but the herbage is scant and dwarfish. There is some good bottom land on Sections 9 and 10, where settlers are harvesting a fine crop of oats. The township is not surveyed south of the river.—*S. L. Brabazon*, 1882.

9. *Outlines.*—The west and east boundaries are very rough, and broken by the valley and adjacent ravines of the Belly River. The soil is light. Some timber along the river. Southwards it is rolling land; sandy loam soil. Trail to the Coal Banks was crossed in Section 4, and Belly River in Section 1. The Coal Banks Shafts are situate in this section.—*F. W. Armstrong*, 1883.

Sub-division.—Is a beautiful plain, nearly all first class land, of black and clay loam, except where it is broken by the precipitous sides, ravines and valley of the Belly River. The bottom lands are rich, and the trees and herbage luxuriant and rich in

color. Coal seams crop out along the river, and in Section 1 there is a colliery, which is forming the nucleus of a village. There is no surface water in the township, except in the river.—*S. L. Brabazon*, 1883.

- 10. Outlines.**—East and west, a dry, rolling prairie. Soil, a light sandy loam, with some surface stone.—*F. W. Armstrong*, 1883.

Sub-division—A beautiful plain; all first-class land. A rich clay loam; but water is very scarce. There are some flats where the grass is heavier than elsewhere. The cattle that were grazing in this locality were in fine condition; and although they had eaten the grass down quite close, and the soil was quite dry, the grass retained much of its original color, which would lead to the belief that it was very nutritious. Pie-aimie, or Extension Coulée, was crossed in Section 36, and a marsh in 32.—*S. L. Brabazon*, 1883.

- 11. Outlines.**—West and east is a very dry, rolling prairie. The soil is a light sandy loam, with surface stone. Scabby Bute, well named from its appearance, is in this township. Coal crops out in the banks of the Bute. In Section 1 Extension Coulée was crossed, and in Section 36 is the Black Spring Ridge and a small creek.—*F. W. Armstrong*, 1883.

Sub-division.—Very good for agricultural purposes, being composed of good loam and clay, and being nicely-undulating prairie. There is no timber, and no surface water.—*J. W. D'Amours*, 1883.

- 12. Outlines.**—North, undulating prairie. No water along this line. Soil, good sandy loam and clay.—*C. A. Magrath*, 1882.

West and east is a rolling prairie. Soil, light sandy loam. No timber, and water scarce. In the east Black Spring Ridge was crossed in Sections 1, 12, and 13, small creeks in 24 and 36, and a couple of marshes in 30.—*F. W. Armstrong*, 1883.

Sub-division.—Very good for agricultural purposes, with a surface generally rolling or gently-sloping. Small sloughs are abundant, but are usually dry by midsummer. The land is composed of sand and clay loams on a clay subsoil. Generally class 1. No wood.—*J. W. D'Amours*, 1883.

- 13. Outlines.**—North, the country is undulating and rolling prairie. The north-west half of this township is sandy; the north-east half is a fair sand and clay loam, with clay and gravel subsoil. West, two miles broken and hilly; the rest is level. The soil is a light sandy loam, with good clay subsoil.—*C. E. Wolff*, 1882.

East, rolling prairie. Grass short and poor, and water scarce.—*F. W. Armstrong*, 1883.

Sub-division.—Lies in the Black Spring Ridge, a broad elevation 100 feet above the surrounding country. The ridge is fine rolling prairie, sloping from the middle of the township to the east and west, and composed of a good black loam on a grey clay subsoil, with a fine growth of grass. At the base of the ridge the soil is light and sandy, with poor vegetation. No wood, and in the month of July no surface water.—*J. F. Snow*, 1883.

- 14. Outlines.**—North, line runs along Little Bow River, crossing it in a couple of places in nearly every Section. Its course is principally around clay cliffs and cut banks. The soil along this line is gravel and clay, thickly covered with surface boulders. In the west the country is rolling prairie. The soil is a light sand and clay loam, with a subsoil of clay. In Section 18 the Little Bow River crosses, running in a north-easterly direction, in a valley 100 feet deep and a mile wide. The average depth of water was 15 inches, with a current of about three miles per hour. The south-west of the township is sandy; the south-east is a fair sand and clay loam, with clay and gravel subsoil.—*C. E. Wolff*, 1882.

Sub-division.—East half, undulating prairie, somewhat broken by the valley of a small creek, which rises in the south-east corner and courses over Sections 1, 12, 13, 24, 25 and 36, to join the Little Bow River. In Section 24 there are indications of large deposits of coal. By July the creek dries up to pools, which contain poor water. The west half of the township is rolling, but much of the surface is broken by deep ravines running to the valley of the Little Bow River. The soil is generally a sandy loam on a grey clay subsoil. The Little Bow River crosses the north-west of the township, in a valley of about three-quarters of a mile wide. The bed of the river is 40 to 100 feet wide, and at the time of survey (July) was shallow. There is no wood in the township.—*J. F. Snow*, 1883.

- 15. Outlines.**—North, the country is very undulating. The soil is a clay loam, with clay subsoil. The west is rolling, with a light clay and sandy loam, on a clay subsoil, and in the south the line runs along the Little Bow River, crossing it in several places. The soil along this line is gravel and clay, thickly covered with surface boulders.—*C. E. Wolff*, 1882.

East, prairie. The line crosses a creek in Section 1, and marshes in 13 and 25.—*F. W. Armstrong*, 1882.

Sub-division.—Undulating, without wood or brush. Soil, a grey clay loam on a clay subsoil. Classes 1 and 2. The Little Bow River crosses the township in a valley 200 feet below the prairie table land, which is cut up by numerous deep ravines running into the valley, especially on the southern side. In the bed of one of these ravines, in Section 5, there are good indications of coal.—*W. Crawford*, 1883.

- 16. Outlines.**—North, good, but dry, rolling prairie.—*O. J. Klotz*, 1882.

West, undulating prairie. The soil is a black clay and sandy loam, with a clay and sand subsoil. Southwards, the soil is a clay loam, with clay subsoil. The surface is undulating, broken and hilly prairie. Some surface boulders. In Section 6 the line crosses the southern extremity of Snake Lake. With the exception of this lake, no water was crossed along the line.—*G. E. Wolff*, 1882.

East, prairie. Line crosses a small marsh in Section 12, and a dry creek bed in 36.—*F. W. Armstrong*, 1882.

Sub-division.—Heavily-rolling prairie. The east quarter is hilly and stony. The soil is a grey clay loam, upon a gravelly clay subsoil. Class 1. There are several alkaline springs in the west half. No wood.—*W. Crawford*, 1883.

- 17. Outlines.**—Open, undulating prairie, with a clay soil. Class 2. No water of consequence, the creeks, at the time of survey (September and October), being dry.—*L. R. Ord*, 1882.

Sub-division.—Rolling prairie, without any wood upon it. The soil is a clay loam on a clay subsoil. Classes 2 and 3. Snake Creek crosses the township. It dries, except in pools, by autumn.—*W. Crawford*, 1883.

- 18. Outlines.**—North, hilly and rolling prairie. Good land. Cart trail to Fort McLeod was crossed in Section 35.—*W. Bell*, 1882.

Open, rolling prairie, dotted with small ponds of good water in north-west portion. Soil, class 2; gravelly on hill tops. The McLeod and Blackfoot Crossing trail crosses the township. A large marsh in Section 6 at the time of survey (September and October) was dry. The dry bed of a lake extends over Sections 24, 13, and the greater part of 12.—*L. R. Ord*, 1882.

Sub-division.—The west half is very hilly; the east half rolling slightly, with gentle slopes, to Snake Lake Valley. In the eastern tier of sections the soil is gravelly and stony on the elevations, but elsewhere it is a good clay loam on a clay subsoil. Little Snake Creek is nothing more than a mere ravine (August), with a few stagnant pools.—*W. Crawford*, 1883.

- 19. Outlines.**—Western part is hilly, but the soil, except in a few sections, is first class, being composed of a rich mould, varying from 6 inches deep, on the hills, to 12 inches in the valleys, with clay subsoil. There are no running streams, but water, wherever obtained, was fresh. There is no timber in any of these townships.—*W. Bell*, 1882.

Rich land; clay loam subsoil. The trail from McLeod to Blackfoot Crossing in Section 36. Water scarce, the only creek in 36, being dry at the time of survey (September and October).—*L. R. Ord*, 1882.

Sub-division.—Nearly all of the soil of this township rates second class. The west part is exceedingly hilly. There are many fresh-water ponds, and the soil supports a good growth of grass. The east part is rolling, with some alkaline flats and rivulets—dry at the time of survey (August).—*C. A. Bigger*, 1884.

- 22. Outlines.**—West, the C.P.R. crosses the line between Sections 7 and 18. South of the line is in an Indian Reserve. North of the line is prairie country, hilly in places, and without surface water. On the east boundary the soil in that portion of the township north of the railway is a good clay loam, with clay and gravel subsoil. This portion of the township is well adapted to agriculture generally. There is no timber.—*T. R. Hewson*, 1883.

Sub-division.—Mostly easy-rolling prairie, with a first class agricultural soil. The C.P.R. traverses the township across the second tier of southerly sections. In the centre and west centre there occurs some considerable tracks of marsh land, and small marshes are scattered throughout. No wood. A good township. The southerly tier of sections is in the Indian Reserve.—*J. J. Francis*, 1883.

- 23. Outlines.**—Traversed by tributaries of Crowfoot Creek. The soil, in parts, is very poor, being alkaline, and the township is devoid of timber; but with these exceptions, is well adapted for agriculture.—*T. R. Hewson*, 1883.

Sub-division.—Mostly rolling prairie, with some undulating, and a portion, about Sections 9 and 10, of level table-land. The soil is general class 1, with intervening stretches of class 2. No wood.—*J. J. Francis*, 1883.

- 24. Outlines.**—North, surface rolling. Good grey clay, from 12 to 18 inches deep; subsoil, clay. No water. The bed of Crowfoot Creek crosses the west side of the township.—*W. Ogilvie*, 1882.

Traversed by tributaries of Crowfoot Creek. The soil is very poor where it is alkaline. There are a number of hay marshes, and in general this township is well adapted to agriculture.—*T. R. Hewson*, 1883.

Sub-division.—Rolling prairie. Soil, mostly a black loam, with intervening stretches of sandy loam, both on a subsoil of clay. Classes 1 and 2. No wood. A good township.—*J. J. Francis*, 1883.

- 25. Sub-division.**—Surveyed the boundaries and sub-divided this township. The southern half is rolling prairie, sloping southerly, while the north half is more hilly, and contains many springs, which are the sources of three creeks flowing south-east—one through Sections 7, 5 and 6, one through 20, 21, 16, 9 and 3, and another through 13 and 12. The soil in the south half is a clay loam, and in the north half a sandy loam, both overlying a clay subsoil.—*J. J. Burrows*, 1883.

- 26. Outlines.**—West, level country. A small creek, with scrub on its banks, crosses Section 30.—*T. R. Hewson*, 1883.

The east is rolling prairie, with a sandy loam soil. An alkaline creek was crossed, on the line, nine times in Section 24. Another creek in 25.—*J. J. Burrows*, 1883.

Sub-division.—Mostly rolling prairie. The southern tier of sections is broken and hilly. Towards the centre there are level tracts, and here and northwards the land is particularly good. The soil is mostly a black loam, with some portions of sandy loam, and good land, apparently, for settlement.—*J. J. Francis*, 1883.

- 27. Outlines.**—The northern half of this township is high-rolling prairie, with numerous sloughs. The southern half is very badly cut up by the coulées of the Rosebud River, which traverses the township. Soil, first class. Good agricultural country. Savasseberry Creek crosses the west line in Section 18.—*T. R. Hewson*, 1883.

- 28. Outlines.**—North, undulating, but mostly rolling prairie. Abundance of poplar timber in the ravines, and rich vegetation. Soil, clay loam, 15 inches deep, on clay subsoil. Class 1.—*T. Fawcett*, 1883.

Something over half of this township is much broken by coulées, which contain spruce and second growth poplar. The balance is rolling country, with numerous sloughs. Soil, first class. Good agricultural country.—*T. R. Hewson*, 1883.

29. Outlines.—Rolling prairie, cut up by the valley of Knee Hill Creek, which crosses from Section 18 to 12, and by numerous coulees and ravines. The only water, except in this creek, is in a large, marshy pond in Sections 13 and 14. The remainder of the township is a very dry clay, with scanty vegetation, and would not average above classes 2 and 3.—*L. R. Ord*, 1884.

South, prairie, with a rich loamy soil, broken by wooded ravines. Creeks in Sections 2, 3, 4 and 5.—*T. Fawcett*, 1883.

30. Outlines.—Rolling prairie, traversed by two streams from north and west, joining about Sections 11 and 14. That from the west runs in a valley 175 to 300 feet deep, with cut banks and many ravines; the other in a shallow coulee, with grassy slopes, bare of timber, which is only to be found in some of the ravines of the first creek. Soil, clay or clay loam. Second class.—*L. R. Ord*, 1884.

31. Outlines.—Rolling prairie. A creek flows in a shallow valley from Section 33 to Section 3. Soil, clay or clay loam. Is second class.—*L. R. Ord*, 1884.

32. Outlines.—North, good rolling prairie land. In Sections 33 and 35 the line crosses marshes. The east half of Section 36 is broken by the west bank of the Red Deer River, and a large coulee running into it.—*E. Bray*, 1883.

Rolling prairie, traversed through the western sections by a stream which crosses the line flowing south, and somewhat broken in the east by ravines discharging into the Red Deer River. Soil, a clay or clay loam. Averages between second and third class.—*L. R. Ord*, 1884.

33. Outlines.—Rolling prairie. Red Deer River curves through the township from Sections 34 and 35 to Sections 1 and 12, and is joined by some deep ravines from the west, where the soil is clay and clay loam, and ranks second class. To the eastward of the valley a sandy loam prevails, and scattered bluffs. In the vicinity of the river willow, poplar and cherry brush were found.—*L. R. Ord*, 1884.

34. Outlines.—Rolling prairie, having a gentle slope to the south-east, where the Red Deer River crosses from Sections 13 and 24 to 2 and 3, the valley here being 500 feet deep, and very rugged. The soil is a sandy loam, ranking nearly first class. There are scattered bluffs of poplar and willow. Cherry and poplar brush were found in the vicinity of the river.—*L. R. Ord*, 1884.

35. Outlines.—Rolling prairie, with scattered bluffs of small poplar, and many ponds, fringed with brush. Soil, sandy loam.—*L. R. Ord*, 1884.

36. Outlines.—North, the Red Deer River runs southward near the line between Sections 35 and 36. The water is very clear, the current swift, and the bottom stony. The river is about 100 yards wide, 6 feet deep, and flows in a valley 200 feet deep below the surrounding country. There are quantities of spruce, birch and poplar on both sides of the valley. The hills at this point are very steep. Leaving the Red Deer, rolling and slightly

rising country is met with. Poplar and willow are scattered thickly over the surface. The soil—a vegetable mould—is ranked first-class.—*T. Kains*, 1883.

Rolling prairie, with bluffs of poplar and willow, and many ponds, fringed with brush. Red Deer River flows through the north-eastern corner, but the country is not broken by ravines, though somewhat hilly. Soil, black sandy loam, of first-class quality, with rich vegetation. An arm of Quill Lake was crossed in the north half of Section 6.—*L. R. Ord*, 1884.

- 37. Outlines.**—High-rolling prairie, with numerous clumps of poplar and willows. Several marshes and ponds were crossed.—*C. F. Miles*, 1884.

South, the Red Deer River crosses the base line and runs southward near the line between Sections 1 and 2. (*See description of river in Township 36*). Rolling and slightly-rising country, with poplar and willows scattered thickly over the surface. The soil—vegetable mould—is ranked first class.—*T. Kains*, 1883.

- 38. Outlines.**—Rolling and undulating prairie, with scattered bluffs of poplar and willow. An old cart trail was crossed in Section 1. In the north half of Section 36 a creek and a trail cross the line. *C. F. Miles*, 1884.

- 39. Outlines.**—The Red Deer River runs easterly through the south-west corner, within banks over 200 feet high, covered with a dense growth of poplar, spruce and birch, the first largely predominating. The waters of Buffalo Lake discharge by Tail Creek through the east half of this township into the Red Deer River. The westerly half is high-rolling and hilly prairie, with numerous ponds and poplar bluffs of considerable magnitude, and willows. The easterly half is much cut up by ponds and lakelets, with numerous bluffs of poplar and some spruce along the banks of Tail Creek. Soil, black sandy loam, becoming lighter as Buffalo Lake is approached. Second class.—*C. F. Miles*, 1884.

- 40. Outlines.**—The east end of the north line commences in a fine flat, which appears to run from the north to the south arm of Buffalo Lake, and then westwards about two miles, after which it slopes towards a large creek, 80 links wide and from 3 to 5 feet deep. A few chains west of this creek is a lake about two miles wide, and large marshes adjoin its north and south shores. A creek from the south empties into the lake. It is about 50 links wide and 2 feet deep, with a soft, muddy bottom. Leaving the lake, the line traverses a range of hills about 200 feet high. Bluffs of poplar are scattered along their slopes.—*C. A. Magrath*, 1883.

The greater part is covered by ponds, lakelets and lakes, besides Buffalo Lake, lying on the east half, and Spotted Lake, occupying the north-west quarter. Spotted Lake Creek, meandering south-easterly through the north-east quarter, discharges into Buffalo Lake. The soil is generally a rich black sandy loam, and rates as first class, although in the immediate vicinity of Buffalo Lake the subsoil is a light sand. Poplar bluffs and grey and red willow clumps are plentiful. Buffalo Lake contains very fair

water, with a sand and gravel beach. Both pike and suckers are to be caught in the lake, at the outlet of Buffalo Lake into Tail Creek, and also at Spotted Lake Creek, where the Tail Creek trail crosses the same.—*C. F. Miles*, 1884.

41. *Outlines*.—Part of Spotted Lake lies on the south-west quarter. There is a gradual rise north from the south boundary towards the centre of the township. The southerly half is more or less covered with willows and willow scrub, and second-growth poplar. The northerly half is more broken by hills, ponds and lakelets, fringed with poplar and willows, the former, here, being of a larger size. Soil, black sandy loam, of considerable depth. The southerly half rates as first class; the northerly half as second class.—*C. F. Miles*, 1884.
42. *Outlines*.—Rolling and somewhat hilly country, with poplar bluffs of considerable magnitude, which diminish in size towards the north. There is a fine nearly open flat on the north half. Various kinds of berry bushes are very plentiful on the south half—a favorite resort for Indian camps during the berrying season. An old well-travelled trail runs southerly through this range from Todd's Crossing, on the Battle River, to the Tail Creek crossing of the Red Deer. Soil, black sandy loam. North half, first class; south half, second class.—*C. F. Miles*, 1884.
43. *Outlines*.—Rolling land, mostly prairie, with bluffs of poplar and willows, and tracts covered with brush. The timber is of inferior quality, and but little of it is fit for building; but the township is well adapted for settlement, the soil being a rich black loam, generally exceeding 15 inches in depth, with sandy loam and clay loam subsoil. Numerous lakes and ponds occur, the principal of which is Red Deer Lake, a sheet of good fresh water, about a mile wide, with apparently no discharge or outlet, lying south-east and north-west, and crossing the north-east corner of the township several miles into it.—*L. R. Ord*, 1883.
44. *Outlines*.—North, rolling and rising. The land is of first class quality, although occasional patches of stone and gravel were noticed. Thick willows and grass swamps are dotted over the country, while a few scattered bluffs of small poplar, very dense in places, were encountered.—*T. Kains*, 1883.
 Is generally heavily-rolling, particularly the eastern part, among the Beaver Hills. It is open in the western part, but well wooded in the sections with poplar of small and medium sizes, and willow and poplar brush. The hollows are nearly always occupied by lakes, some of fair size which dot the surface in all directions. The vegetation is luxuriant, and the soil is rich and fertile, being a deep black loam, with clay subsoil. The west line crosses a trail in Section 6 and and two more in 31.—*L. R. Ord*, 1883.
45. *Outlines*.—West and east, Battle River runs through the north-west portion of this township. The west half is very undulating and broken by lakes and ponds. The east half is more level. There are many poplar bluffs scattered throughout. The soil is of first class quality.—*J. J. McArthur*, 1883.

South, first class land. Undulating, and contains ponds, swamps and willow clumps.—*T. Kains*, 1883.

Sub-division—High-rolling land and, in places, hilly with intervening lakes and small ponds. The soil is very rich and covered—where not timbered—with very rank grass, affording one of the best grazing tracts. Battle River flows through the north-westerly sections—30 and 31—and lakes are abundant in every section of the township.—*W. Beatty*, 1883.

- 46.** *Outlines*.—West and east, Battle River runs through this township. The south side of the valley is more or less thickly wooded with poplar, and a few patches of spruce. To the south of the river the land is high and undulating, and of first class quality. The soil to the north is equally good, but the country is much broken by lakes and ponds.—*J. J. McArthur*, 1883.

Sub-division.—The northern part of the township is timbered with poplar, having small intervening patches of willow and scrub. The central and southern portions are covered with poplar bluffs, willow and scrub, there being no open prairie. Battle River runs north, along the eastern boundary of Sections 6 and 7, thence north-easterly across Section 17, thence easterly across the township, passing out at Section 13. The soil is good. Bittern Lake breaks on the north-east sections.—*D. Beatty*, 1883.

- 47.** *Outlines*.—A great part of this township is submerged by large lakes. On the west, Section 6 is scrubby prairie, and 7, 18, 19 and south half of 30 are covered with poplar bush. A large lake, with innumerable islands, submerges Section 31 and the north half of 30. The township is generally well wooded, and the soil excellent.—*J. J. McArthur*, 1884.

- 48.** *Outlines*.—North, prairie and scrub, alternating with heavy bush and numerous marshes. Big Hay Lake submerges Section 31 and the greater part of 32. On the shores of the lake wood was found.—*C. A. Magrath*, 1883.

The north-western part of this township lies in Big Hay Lake. Another lake, with innumerable wooded islands, encroaches on the south-west part. Between the latter and Big Hay Lake is a beautiful strip of country, watered by a creek. Another creek connects the lake, in which are wooded islands, with Bittern Lake, which encroaches on the south-east corner. The remainder of the township is more or less densely wooded with poplar, and dotted with deep ponds. The soil is first class.—*J. J. McArthur*, 1883.

- 49.** *Outlines*.—West, undulating, with many swamps. Country is timbered all along the line. A good sized lake was crossed in Sections 18 and 19, and the telegraph line in the south of 18.—*J. J. McArthur*, 1884.

Is very much broken by ponds and muskegs. The timber is of fair size and quality, and consists of poplar, large willow and some spruce. The telegraph line runs through the southern portion, while the Hay Lakes trail traverses the north-easterly part. The soil is of fair quality, but on account of the broken character

of the country it has been ranked second and third class.—*T. Kains, 1884.*

- 50.** *Outlines.*—West, undulating, with poplar bush. Line crosses a creek in Section 19 and a cart trail in 30. Water is very plentiful, large bodies of clear water being crossed in every section.—*J. J. McArthur, 1884.*

Undulating to hilly country, much broken by lakes, ponds and muskegs. In the vicinity of the Hay Lakes trail fine prairie openings exist. The timber is poplar, birch and spruce, the first named being much more abundant than the others. Willow grows to a wonderful magnitude in this country. This township has been classed 3.—*T. Kains, 1884.*

- 51.** *Outlines.*—Sections 6 and 7, scrub and brulé, with a little spruce; 31, 30, 19 and the north of 18 are heavily timbered with poplar, interspersed with spruce. Creeks were crossed in 6, 30 and 31, and a small lake in 19. A large lake submerges the south half of 18 and part of 7.—*L. R. Ord, 1882-83.*

- 52.** *Outlines.*—North, heavily wooded. Old Man's Creek crosses the line in Section 33; branches of it in Sections 31 and 32. In Section 34 a marsh was crossed, and in 35 a creek. The soil is light, and class 3.—*G. A. Simpson, 1883.*

West, heavy timber, except the north half of Section 6 and the south of 7, which are scrubby. Section 6 is broken by two good sized lakes. Soil, of a light character.—*C. A. Magrath, 1883.*

- 53** *Sub-division.*—Is on the western limit of the Beaver Hills. Soil, light, and class 3. Timber small, fit for fuel only, and surrounded by a dense willow growth. Water is scarce. In Sections 6, 7 and 31 is some good building poplar, spruce and fallen timber. Other sections are scrubby. Creeks cross the west line in Sections 31 and 19, and Old Man's Creek 4, 5, 6 and 7. From Section 30 the Edmonton trail crosses the north-west.—*G. A. Simpson, 1882.*

- 54** *Outlines.*—West, Section 30, and the north of 6, are scrubby, the remainder of this line being bush. Trails cross the line in Sections 19, 30 and 31. North Saskatchewan River crosses the line in the north half of Section 30. Sections 31, 30 and part of 19 are in the Fort Saskatchewan Settlement.—*G. A. Simpson, 1882.*

Sub-division.—About one-third of this township is timbered with poplar in bluffs; the remainder is covered with a dense growth of high willows and willow scrub. The soil is generally good. There are a dozen or more settlers, who have good log houses, and from 5 to 25 acres each under cultivation. The headquarters of the Mounted Police is located in Section 31, and Sections 31, 32 and part of 33 are in the Fort Saskatchewan Settlement. The Battleford trail and another cross the line in Section 34. Two more trails, one called the Ridge Road, cross in 33. The North Saskatchewan River runs in a northern direction through the centre of the settlement.—*D. Beatty, 1882.*

- 55** *Sub-division.*—The soil is good, and class 1, but is covered with clumps of heavy poplar and thick, dense willows. There are

small swamps or muskegs scattered throughout. The Saskatchewan River enters on Section 36, receives the Sturgeon River—from the north-west—on Section 23, and passes out on Section 4. The land along the Sturgeon River is high and rolling. The south-central portion is occupied by the Fort Saskatchewan Settlement. Beaver Lake and Battleford road crosses the south-east.—*D. Beatty, 1882.*

56. *Sub-division.*—Thickly timbered with poplar, except along the Victoria trail, where the poplar is scattered with high willow and scrub. Soil, light and sandy.—*D. Beatty, 1883.*

57. *Sub-division.*—Thickly timbered with poplar, averaging 6 inches in diameter, with dense underbrush. In many places willow, with scattered willow swamps and small muskegs. Soil, light and sandy.—*D. Beatty, 1882.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XXIII.

- 5. Outlines.**—That portion of the township which has been surveyed lies east of the St. Mary's River, and is undulating. Soil, clay loam, over clay.—*C. E. Wolff*, 1883.

South, undulating prairie, with good sandy loam soil, and covered with bunch grass. A coulée containing a creek was crossed in Section 32.—*O. J. Klotz*, 1883.

- 6. Outlines.**—As far as St. Mary's River, the surface is undulating. Soil, clay loam. West of the river is an Indian Reserve.—*C. E. Wolff*, 1883.

- 8. Sub-division.**—Consists only of about 150 acres in extent, formed by a bend of the Belly River. The rest of the land which should form the township lies in the Indian Reserve.—*S. L. Brabazon*, 1883.

- 9. Outlines.**—West and east is cut up by Belly River. The soil is light and land rolling. Some timber along the river.—*F. W. Armstrong*, 1883.

Sub-division.—The survey of this township southwards ceases at the Belly River. Old Man's River enters the township at the north-west, and forms a junction with the Belly River on Section 27. There is considerable bottom land in the township, some of which is under cultivation. The bottoms of both rivers join in Sections 33 and 38, and there is a fine flat to the left of Old Man's River, and in Sections 28, 20 and 23, which is all occupied. The bottoms below Old Man's River are very stony. The rest of the township is a black or a clay loam. There is some poplar.—*S. L. Brabazon*, 1883.

- 10. Outlines.**—West and east, a dry, rolling prairie. Soil, a light sandy loam, with some surface stone. The Old Man's River flows across the south-westerly corner, and has its confluence with the Belly River in the township southwards.—*F. W. Armstrong*, 1883.

Sub-division.—Has a large area of excellent land. Soil, clay loam on clay subsoil. Class 1. The surface rises and falls in gradual and long undulations, and there is no broken land, except on the margin of Old Man's River, in the south-west angle. A gravel ridge enters near the centre of the north boundary and continues half a mile southwards, when it ceases to be gravelly. There is some bottom land on Section 6, near the river. Surface water is scarce throughout the township.—*S. L. Brabazon*, 1883.

- 11. Outlines.**—West and east is a very dry, rolling prairie. The soil is a light sandy loam, with surface stone.—*F. W. Armstrong*, 1883.

Sub-division.—Either level or undulating prairie, composed of a good clay or a sandy loam soil on a sandy subsoil. Class 1. There are no signs of water or wood in the township. Excellent grazing prairie, generally.—*J. W. D'Amours*, 1883.

- 12. Outlines**.—The north line descends into a level flat, which continues across the township. Soil, very good.—*C. A. Magrath*, 1882.

West and east is a rolling prairie. Soil, light sandy loam. No water; no timber.—*F. W. Armstrong*, 1883.

Sub-division.—Suitable either for agricultural purposes or for grazing. The surface is nicely-rolling or level throughout, composed of a good loam and clay subsoil, and covered with a good, soft grass. Small dry hay sloughs are abundant. No wood.—*J. W. D'Amours*, 1883.

- 13. Outlines**.—West, undulating prairie, with a sandy grey clay soil. Water scarce. Fort McLeod trail crosses north and south, near the line. East, undulating and level. A small watercourse in Section 12, and marsh in 25.—*C. E. Wolff*, 1882.

Sub-division.—Rolling or undulating prairie, composed of a good sandy loam, class 1, on a grey clay subsoil, and well suited for either agricultural or grazing purposes. The Little Bow River enters the township in the north-west corner and breaks on Sections 31 and 32. It has a sluggish current towards midsummer, and is then much reduced from its spring-time volume.—*J. F. Snow*, 1883.

- 14. Outlines**.—North and east is undulating prairie. Soil, a light sandy and clay loam, with a clay subsoil. In Section 13 Little Bow River was crossed, running in a north-easterly direction, in a valley 100 feet deep and a mile wide. The average depth of water was 15 inches, with a current of about two miles per hour.—*C. E. Wolff*, 1882.

West, undulating prairie. Soil is a sandy grey clay. No water. Section 31 is a large flat.—*F. W. Armstrong*, 1882.

Sub-division.—Undulating prairie, except the valley of the Little Bow River, with a sandy loam soil, averaging 8 inches deep, on a subsoil of grey clay. Along the valley of the river, which runs through Sections 5, 4, 3, 10, 14, 13 and 24, the soil is very changeable, being clay, gravelly and sandy by turns. Grass is generally better outside than in the valley. The water is 3 or 4 feet deep in spring, but dries into pools in September. There is no wood. The township is valuable for grazing.—*J. F. Snow*, 1883.

- 15. Outlines**.—The townships is undulating and rolling. The soil is a light clay and sandy loam, with a clay subsoil.—*C. E. Wolff*, 1882.

Sub-division.—Undulating prairie of grey clay loam soil on a gravelly clay subsoil. Classes 1 and 2. The alluvial soil has a depth of from 6 to 10 inches. There are a number of dry creeks, which probably contained water before the time of survey (September), and there are several springs throughout the township, which are slightly alkaline. No wood. The cart trail from Fort

McLeod to Blackfoot Crossing crosses the township.—*W. Crawford*, 1883.

- 16. Outlines.**—North, good, but dry, rolling prairie. The trail from Fort McLeod to Blackfoot Crossing runs through this township. The line crosses a creek in Section 36, and three more in 35.—*O. J. Klotz*, 1882.

West and east, undulating prairie. The soil is a black clay and sandy loam, with a clay and sand subsoil.—*C. E. Wolff*, 1882.

Sub-division.—Rolling and hilly, of a clay loam soil on a clay subsoil. Classes 1 and 2. No wood. A fair supply of surface water in the west half. The Fort McLeod trail crosses the township.—*W. Crawford*, 1883.

- 17. Outlines.**—West, very undulating, greatly cut up with coulées and one or two small creeks running south-east to the Little Bow River. The soil is a good sandy loam, with clay subsoil.—*C. E. Wolff*, 1883.

East, open, undulating prairie, with a clay soil. No water on this line, though a creek was crossed in Section 18, but at the time of survey (September and October) it was dry.—*L. R. Ord*, 1882.

Sub-division.—Rolling and hilly prairie, traversed by Snake Creek, which was dry at the time of survey (August and September), except in stagnant pools. The soil is a good quality of clay loam on a clay subsoil. There is a spring of good water near the east boundary of Section 21. No wood.—*W. Crawford*, 1883.

- 18. Outlines.**—West, very undulating, and greatly cut up with coulées. The soil is a good sandy loam, with clay subsoil. Excellent grazing land. Marshes were crossed in Sections 6, 7 and 18, and a creek in 6.—*C. E. Wolff*, 1884.

East, open, rolling prairie. The McLeod and Blackfoot Crossing trail, and, in September, a large dry marsh, in Section 1.—*L. R. Ord*, 1882.

Sub-division.—Rolling and hilly, without any growth of wood. In the north-east corner the hills are gravelly. The hollows or bottoms are good land. Several small but good meadows lie in the north half of the township. Soil, clay loam on a clay subsoil, except on the hills. Berry Water Marsh covers the whole of Section 14 and half of Section 12, and has fairly good water. There are numbers of small hay meadows, sloughs and marshes, dry and wet at time of survey (August).—*W. Crawford*, 1883.

- 19. Outlines.**—West, very undulating. The soil is good and the grass plentiful, but on the tops of the ridges the soil is light.—*C. E. Wolff*, 1883.

East, hilly country. The soil, except in a few sections, is first class, being composed of a rich mould, varying from 6 inches deep on the hills to 12 inches in the valleys, with clay subsoil. There are no running streams, but wherever water occurs it is fresh. No timber.—*W. Bell*, 1882.

Sub-division.—The east half is very knolly, and filled with small fresh-water ponds, abounding in game. The soil is a rich clay and black loam, and luxuriant grasses cover the spaces between the ponds. The west half is first class undulating

prairie, admirably adapted for agricultural purposes. There is no wood.—*J. F. Snow*, 1884.

- 22. Outlines.**—East, the C.P.R. crosses the line between Sections 12 and 13. South of the line is an Indian Reserve. North of the line is prairie country, hilly in places. No water.—*T. R. Hewson*, 1883.

Sub-division.—The C.P.R. crosses this township, which is rolling prairie, with a first class soil. It is only a little hilly and broken in the vicinity of Section 26. Gleichen Station (C.P.R.) is situated on the eastern boundary. South of the railway is an Indian Reserve.—*J. J. Francis*, 1883.

- 23. Outlines.**—West, rolling prairie. The C.P.R. crosses the south-west corner through a large alkaline slough. A large alkaline lake submerges parts of Sections 6 and 7. The south half of Section 30 is a level prairie table-land. To the east the country is rolling. Creeks cross the line in Sections 12 and 25.—*T. R. Hewson*, 1883

Sub-division.—Rolling and undulating prairie. Soil, a black loam, 2 to 9 inches deep, on a clay subsoil. Generally rated class 2. No wood. The north-east corner sections are somewhat broken and hilly.—*J. J. Francis*, 1883.

- 24. Outlines.**—North, surface rolling. Good grey clay, from 12 to 18 inches deep; subsoil, clay. Water scarce.—*W. Ogilvie*, 1882.

Rolling country, with a sandy loam soil, of second class character. On the east boundary of Section 12 a tributary of Crowfoot Creek crosses, alkaline water in pools, no current. This township is devoid of timber. Hay marshes are numerous, and the land is fairly adapted to agriculture.—*T. R. Hewson*, 1883.

Sub-division.—Rolling and undulating. Soil, a black loam on clay, sandy and sandy clay subsoils. Classes 2 and 3. There are some good grazing sections, and in the vicinity of Sections 19, 20, 29, 1 and 3 the land is somewhat broken and hilly. No wood.—*J. J. Francis*, 1883.

- 25. Outlines.**—West, rolling country. The only water seen was a small creek crossing the line in Section 31.—*T. R. Hewson*, 1883.

East, prairie. Creeks cross the line in Sections 1, 12 and 25. At the time of survey (August) the creeks in 12 and 25 were dry. Soil, clay and sandy loams.—*J. J. Burrows*, 1883.

South, surface rolling. Good, deep, grey clay soil.—*W. Ogilvie*, 1882.

Sub-division.—Broken and hilly, and high-rolling in the north-westerly (diagonal) half of the township, and rolling prairie in the south-east and easterly corner. Sections 32, 33 and 34 in the north, are high-rolling. Soil, generally a sandy clay and sandy loam. Class 2.—*J. J. Francis*, 1883.

- 26. Outlines.**—Rolling and level country. A small creek, with scrub on its banks, crosses the line in Section 30. The soil is a clay loam on a clay subsoil. Class 2. Water scarce.—*T. R. Hewson*, 1883.

Sub-division.—Low, level, and gently-rolling prairie. Soil, classes 1 and 2. The level portions are bottom lands, and

rich. Prickly Pear Creek crosses the township, and has a small tributary joining it. The north-westerly sections are somewhat broken and hilly. No wood.—*J. J. Francis*, 1883.

- 27. Outlines.**—Rolling country. Good clay soil, watered by Savasseberry Creek, which is a clear stream, with sandy bottom and averaging in width about 40 links. Well adapted to agriculture.—*T. R. Hewson*, 1883.

- 28. Outlines.**—North, rolling and undulating prairie, Soil, clay loam. Classes 1 and 2. Some streams and marshes occur, but generally water is scarce.—*T. Fawcett*, 1883.

Rolling country. Arrow Creek, crossing the east line in the south half of Section 13, turns and flows in a southerly direction, almost parallel to the line. Good clay soil.—*T. R. Hewson*, 1883.

- 29. Outlines.**—Rolling prairie, broken by the valley of Knee Hill Creek, and by numerous ravines discharging into it. This valley crosses from Sections 18 and 19 to Section 13, and is from 150 to 200 feet deep. Some small poplar and spruce grow on the slopes and in the valley. Towards the north boundary the country gradually rises into hills, some 150 feet above the plain. Soil, clay loam or clay. Third class.—*L. R. Ord*, 1884.

South, prairie, undulating and hilly. Soil, clay loam; good quality. The line crosses creeks in Sections 1, 2, 3, 4 and 6.—*T. Fawcett*, 1883.

- 30. Outlines.**—Rolling prairie, broken by Three Hills Creek, crossing from Section 31 to Section 13, in a valley, deepening to the eastward, and joined by numerous deep ravines, principally from the high land in the southern part of the township. A small amount of timber is growing in the valley and ravines. Soil, a stiff clay or clay loam. Averages third class.—*L. R. Ord*, 1884.

- 31. Outlines.**—Rolling prairie. The eastern part lies in the valley of a creek, which flows through Range 22, and here the soil is a hard clay, below third class, but the greater portion of the township is gently-rolling prairie, with rich vegetation and first class sandy loam soil.—*L. R. Ord*, 1884.

- 32. Outlines.**—North, rolling prairie, with a rich soil. A creek crosses the line seven times in Section 36.—*E. Bray*, 1883.

Rolling prairie in the eastern sections, with a clay soil, of poor quality, improving towards the west, where it becomes first class, with rich vegetation. Devil's Pine Creek crosses the line in Sections 24 and 25. The south-eastern portion of the Three Hills was crossed in Section 18.—*L. R. Ord*, 1884.

- 33. Outlines.**—Rolling prairie, very dry, the only water being a creek that crosses the township, flowing south-east. The soil is, in places, fair, but averages second class.—*L. R. Ord*, 1884.

- 34. Outlines.**—Rolling prairie, becoming more uneven towards the north, where the country is dotted with occasional grassy ponds. The soil is generally a sandy loam, of fair quality, averaging second class. A small creek was crossed in Section 7, and Devil's Pine Creek in 18.—*L. R. Ord*, 1884.

35. Outlines.—Very heavily-rolling prairie, with bluffs of small poplar and numerous ponds and lakes, generally fringed with willows. The southern parts of two of the Quill Lakes lie in the north-eastern sections. Soil, in places, is rich, and vegetation very luxuriant, but it would not average above second class.—*L. R. Ord, 1884.*

36. Outlines.—North, the country is rough and rolling, and broken by numerous ponds and swamps. Poplar and willow are thickly scattered over the surface. The soil, which is composed of vegetable mould, is ranked first class. A cart trail to the old barracks of the Mounted Police, situated on the Red Deer River, about ten miles north, crosses the line in Section 36.—*T. Kains, 1883.*

Rolling land, with bluffs of poplars and willows. Water is plentiful in ponds, which are numerous. An arm of Quill Lake was crossed in the north half of Section 1. The soil, in places, is rich and deep, but there are other places where it is light.—*L. R. Ord, 1884.*

39. Outlines.—The Red Deer River runs easterly through the south half of Section 1. The banks here are over 200 feet high, wooded with some good sized poplar, birch and spruce. The southerly half is a rolling prairie, with bluffs of second-growth poplars and willow. On the north half the bluffs are of greater magnitude, and the timber—poplar—is of a larger size. Much willow grows, particularly on the north half. Soil, black sandy loam, with sandy subsoil. A creek, with high banks, cuts south-easterly through Section 6, along the banks of which some spruce trees are growing.—*C. F. Miles, 1884.*

40. Outlines.—North, the line passes through a dense growth of high, grey willows, and afterwards enters a hilly country, which is wooded with poplar and high, grey willows. No prairie openings on the line. Soil, first class.—*C. A. Magrath, 1883.*

Is rolling, and much cut up by lakes and ponds. A good sized creek runs diagonally south-easterly, spreading out in muskegs in various places. It is more or less open adjacent to the creek, and covered, in many places, with a dense growth of willows. The north-east half of this township is high-rolling and hilly, with numerous ponds, and has a more or less dense growth of poplar and willows. The south-west half is rolling, partly open, but mostly wooded with second growth poplar, from 2 to 5 inches in diameter, and interspersed with ponds. Soil, sandy loam. Second class.—*C. F. Miles, 1884.*

41. Outlines.—Is generally high-rolling and hilly country, with numerous ponds, and more or less densely wooded with poplar and willows. A good sized creek, emptying southerly into Spotted Lake, crosses and re-crosses the east boundary. For agricultural purposes, this township is rather too much broken, but the growth of pea-vines, vetches and grasses is luxuriant, and therefore it is probably better adapted for grazing. There is some

spruce in the westerly half. Soil, black sandy loam. Second class.—*C. F. Miles*, 1884.

South, heavily wooded, and no prairie openings on the line. Soil, first class. North of the line the country is very hilly, and thickly covered with poplar.—*C. A. Magrath*, 1883.

- 42. Outlines.**—North, undulating prairie, thickly covered with poplar, balm of Gilead, spruce and thick brush. Creeks were crossed in Sections 34, 35 and 31.—*J. Kerr*, 1884.

A creek, running south-easterly, meanders through the east half. But few prairie openings were met with, and it is more or less densely wooded with poplar, from 2 to 6 inches in diameter, and willows. Some muskegs lie in the north-west corner. The north-east corner is partially open, with bluffs of fire-killed poplars. Soil, sandy loam. Second class.—*C. F. Miles*, 1884.

- 43. Outlines.**—Battle River flows into the northern sections, spreading into a lake expansion, surrounded by a large marsh, which occupies several sections. The remainder of the township is gently-rolling prairie, with bluffs of poplar and willow, these increasing in number and density towards the western boundary. A slightly brackish lake lies on the line, in Sections 12 and 13, and in its vicinity the soil is white, in patches, from alkaline matter, although very rich with luxuriant vegetation, and well fitted for agriculture.—*L. R. Ord*, 1883.

Sub-division.—This township contains much water. Battle River enters on the west side of Section 30, flows in an easterly direction through Sections 29, 28 and 27, entering a lake in Section 26. There are several lakes in the centre and north of the township. The water is good, and the river and lakes abound in fish. Sloughs and small brooks are numerous. The surface of the country is undulating prairie, with poplar bluffs and patches of thick brush scattered about. In the south-west portion of Section 6 there are spruce trees, 20 inches in diameter, and generally along the south boundary of the township large poplars and balm of Gilead are to be found. Sections 33 and 34 are almost entirely occupied by an immense marsh, which extends into Township 44. The vegetation is good, and the soil is well suited for agriculture, being a black sandy loam, about 12 inches deep, on a sandy sub-soil.—*J. Kerr*, 1884.

- 44. Outlines.**—North, the soil is generally first class. The country is slightly undulating, with patches of willows and numerous ponds and swamps, in the vicinity of which beds of alkali were noticed. Battle River crosses the line in Section 36, and runs north-easterly in a bed, one chain wide, at the bottom of a valley which contains some fine building timber, and is about 75 feet below the surface of the adjoining country.—*T. Kains*, 1883

In the north-west half the land is rolling and mostly open, with bluffs of poplar and willow. The other sections are also rolling prairie, but more thickly covered with bluffs and dotted with ponds and lakes. Battle River, in a shallow valley, traverses the township, flowing north, and leaves it in Section 36, where

several trails cross the stream. The land over all the township is excellent.—*L. R. Ord*, 1883.

Sub-division.—Battle River Lake crosses the south boundary of Section 3, and soon narrowing into a river, flows north-west through Sections 3, 4 and 8, then north through 17, 20, 29 and 32, and finally east through 33, 34, 35 and 36. The river banks are generally about 30 feet high, and only 200 to 250 feet apart, the river itself being only about 100 feet across, with a three-mile current. Part of an immense marsh occurs in the south of Sections 3 and 4, and extends into Township 43. The surface is undulating, with poplar bluffs and patches of thick brush. The soil is a deep sandy loam, producing excellent vegetation. Small sloughs are numerous, and the water is generally good.—*J. Kerr*, 1884.

- 45** *Outlines*—West and east, high and undulating, with many scattered bluffs of poplar, and some marshes. Battle River runs through this township, close to and sometimes crossing the eastern boundary. The land throughout is of first class quality.—*J. J. McArthur*, 1883.

Sub-division.—Rolling, scrubby prairie, with bluffs of poplar and high willow. The upland is nearly all of excellent quality—black alluvial soil, of an average depth of 12 inches, on a clay subsoil. Battle River is here about 70 feet wide, and flows through the south-eastern sections in a valley ranging from 40 to 100 feet under prairie level, and 650 to 1300 yards wide, and is filled with a dense growth of willow.—*W. Beatty*, 1883.

- 46.** *Outlines.*—West and east, the north half is traversed by two creeks—the Big Stone, and a tributary. The south half is high and undulating, with a few scattered bluffs. Although light in places, the soil is of a good quality.—*J. J. McArthur*, 1883.

Sub-division.—Rolling prairie, covered with thick scrub willow and poplar. Soil, classes 1 and 2, and good throughout. The north-east quarter of the township is timbered with poplar, and the balance is divided between bluffs of poplar, scrub, willow and open prairie. There is a plentiful supply of water in the lakes and muskegs, which abound throughout.—*D. Beatty*, 1883.

- 47.** *Outlines.*—West, rolling prairie, with a third class sandy loam soil, 6 inches deep, with a clay subsoil, covered with poplar, excepting Section 6 and south half of 7.—*J. J. McArthur*, 1884.

East, Section 1 is scrubby prairie. Nos. 12, 13, 24 and south half of 25, are covered with poplar bush. A large lake, with innumerable islands, submerges Section 36 and the north half of 25.—*J. J. McArthur*, 1884.

South, rolling prairie with scattered poplar bluffs, willow and scrub. Extensive marshes or reedy ponds were crossed in Sections 2, 4, 5 and 6, the one in Sections 5 and 6 being over 75 chains wide, and clear, open water in the centre. Creeks in Sections 3 and 4.—*D. Beatty*, 1883.

- 48.** *Outlines.*—The north-east quarter is submerged by Big Hay Lake. The south-east is a beautiful strip of country. The township is 18½*

more or less wooded, and there is abundance of surface water.—*J. J. McArthur*, 1883.

North, bush and scrub. The surface is broken by numerous lakes and marshes. Creeks cross the line in Sections 31 and 33.—*C. A. Magrath*, 1883.

West, rolling prairie, with a third class sandy loam soil, 7 inches deep, and a clay subsoil, timbered with poplar and some spruce and birch. A small stream, having banks 150 feet high, was crossed.—*J. J. McArthur*, 1884.

49. Outlines.—East, undulating, with many swamps. Country is timbered all along the line. A good sized lake was crossed in Sections 13 and 24, and the telegraph line in the south half of 13.—*J. J. McArthur*, 1884.

50. Outlines—East, undulating with poplar bush. Line crosses a creek in Section 24, and a cart trail in 25. Water is very plentiful, large bodies of clear water being crossed in every section.—*J. J. McArthur*, 1884.

51. Outlines.—North, bush and scrub, with a few prairie openings. The line crosses creeks in Sections 32 and 36, and ponds and marshes in all the sections except 36.—*C. A. Magrath*, 1883.

West, poplar bush and scrub. Lakes were crossed in Sections 6 and 18; ponds in 18, 19, and 30; marshes in 31; and the trail from Edmonton to Hay Lakes in the north half of 31. The easterly two-thirds of the township is in the Beaver Hills, and is heavily timbered with poplar, interspersed with spruce. Creeks were crossed in Sections 1, 25 and 36, and a small lake in 24. A large lake submerges the south half of 13 and part of 12.—*L. R. Ord*, 1882-83.

52. Outlines.—North, large poplar, fir, cottonwood, willow and fallen timber. Water was found in every section, and a trail crossed in Section 32.—*G. A. Simpson*, 1882.

West, bush and scrub, with a few prairie openings. Creeks in Sections 6, 19 and 30. Many marshes and ponds, and in 31 the Fort Saskatchewan trail. East is heavily timbered, except the north half of Section 1 and the south of 12, which are scrubby. South, bush and scrub, with a few prairie openings. The line crosses creeks in Sections 1 and 5, and ponds and marshes in all the sections except 1. A little *brulé* was found in Section 6.—*C. A. Magrath*, 1883.

Sub-division.—The easterly two-thirds lies in the Beaver Hills. Is covered with a dense growth of poplar and willow, with some spruce bluffs, and here and there a small tamarac swamp. The soil is about second class, excepting in parts of the township where the fire has burnt away the alluvial surface. Small ponds of good water are numerous.—*W. Beatty*, 1882.

53. Sub-division.—The North Saskatchewan crosses circuitously from Section 6 to 34, and the Edmonton trail from 6 to 24. The western and northern parts of this township are covered with bluffs of poplar and birch, suitable for fencing, and in many cases building material may be had. The Beaver Hills commence at Section 5,

and cover the south-east part of the township. Good timber is found here. Water throughout is excellent. Soil, black loam, with clay subsoil. It is in every way well adapted for settlement.—*G. A. Simpson, 1882.*

54. Sub-division.—The Saskatchewan River flows through this township. The timber along its banks consists of poplar, fir and birch, and is suitable for building purposes. Coal seams are numerous, and traces of iron appear. The remainder of the township is covered with bluffs of poplar, in which some good building material may be found. Soil—a rich black loam, with clay subsoil. Fort Saskatchewan is situated in the north-east corner, and there are settlers in other parts of the township, and a number of trails. Surface water is plentiful.—*G. A. Simpson, 1882.*

55. Outlines.—North, poplar, spruce, tamarac and willow. Sturgeon River, flowing north, crosses the line in Section 32, the only surface water being in a small marsh in Section 33.—*D. Beatty, 1883.*

Sub-division.—Admirably suited for settlement, the land being high and dry, and the soil a rich sandy loam. The divide between the Saskatchewan and Sturgeon Rivers runs through the township in a south-easterly direction, the land sloping gently to the north-east and south-west on either side. The divide is covered with a thick growth of poplar, with grey willow on the lower slopes. Most of the poplar is of fair size, and would be suitable for building material. The only stream is the Sturgeon River, which runs through the north-west corner. It is very tortuous, with high, precipitous banks, especially on the northern side, where, in places, they are over 200 feet in height. It is thickly wooded on the north side. The land on the north of the river is much broken by deep ravines. There are a few hay marshes towards the south.—*G. A. Simpson, 1882.*

56. Outlines.—North, heavily timbered, except Section 34, which is scrubby. Lakes submerge the greater part of the east halves of Sections 31 and 36. A large tamarac swamp or marsh was crossed in 31. A creek, and the trail to Athabasca Landing, cross the line in Section 34.—*C. A. Magrath, 1883.*

Sub-division—About four-fifths is thickly timbered with poplar, averaging about 6 inches in diameter. The remainder consists of patches of willow and willow scrub. The soil is too light for agricultural purposes, except that portion lying south of the Sturgeon River. A lake submerges much of Sections 25 and 36.—*G. A. Simpson, 1882.*

57. Outlines.—Timbered with a dense growth of poplar, with some scattered pitch pine in the north-east. The soil is light and sandy. Numerous marshes, swamps and lakes, especially in the northern half.—*D. Beatty, 1883.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XXIV.

8. *Sub-division*.—Is a fractional township, and unsurveyed south of the Belly River. It consists almost entirely of bottom land of excellent quality, and is nearly all occupied and under cultivation at the time of survey. An island in the Belly River is heavily wooded with cottonwood trees, averaging 10 inches.—*S. L. Brabazon*, 1883.

9. *Outlines*.—West, rolling prairie, with a sandy soil. A trail in 19, and a small marsh in 7, were intersected. Neither wood nor water on line.—*M. Aldous*, 1881.

East, is a very dry, rolling prairie, broken by Belly River, which flows across the south-eastern portion. Some good timber along the river.—*F. W. Armstrong*, 1883.

Sub-division.—Contains fine prairie land, and also some valuable bottom land along the Belly River. The banks of this river are not nearly so high, rugged and precipitous as they are further down, as loaded teams can pass, in many places, without difficulty, into the valley. The soil of the township is a clay loam. Classes 1 and 2. There were large herds of cattle feeding, and their fine condition gave indications of the nutritious quality of their food; but the usual absence or lightness of rainfall in this region forces the conviction that the land is valuable only as a cattle ranche.—*S. L. Brabazon*, 1883.

10. *Outlines*.—West, rolling prairie, with a sandy soil. Old Man's River in Section 30, and Coal Banks trail to Fort McLeod in 31, were intersected. The soil to north of river is gravelly. Neither wood nor water beyond the limits of the river.—*M. Aldous*, 1881.

A dry, rolling prairie. Soil, a light sandy loam, with some surface stone. The Old Man's River flows diagonally through it. There is a little timber along the river bottom.—*F. W. Armstrong*, 1883.

Sub-division.—Old Man's River takes a diagonal and meandering course across from the north-west corner to the south-east corner. It is a beautiful and clear stream. The land is rough in the vicinity of the river; the banks are high, rough and precipitous, particularly in Sections 1, 2 and 3 on the south. On the north side of the river the land is most excellent, surface rolling, and soil a fine clay loam. At the time of survey large herds of cattle were feeding upon it. Surface water is scarce, except in the river, and there is no wood. A stratum of flagstone, 12 or 18 inches thick, resting on the clay banks, exists along the Old Man's River, and as it has been constantly undermined the projecting portions are periodically breaking off, and are scattered along the banks in large masses.—*S. L. Brabazon*, 1883.

- 11. Outlines.**—West, rolling prairie, with a fair sandy soil. There is a small marsh in northern half of Section 30, but surface water, generally, is scarce.—*M. Aldous*, 1881.
 East, a very dry, rolling prairie. The soil, a light sandy loam, with surface stone.—*F. W. Armstrong*, 1883.
Sub-division.—The southern portion of the township is chiefly dry and gently-undulating prairie, broken, in places, by bottom lands having a good growth of grass. The soil is a black clay loam, or a grey clay loam on a clay subsoil. Class 2. The northern portion of the township is more undulating. Soil, a clay loam and, in places, a sandy loam, on a subsoil of clay. The whole township is very suitable for agriculture. Surface water is scarce.—*G. Ross*, 1883.
- 12. Outlines.**—The north of the township is rolling. Soil, clay loam, and in some places sandy loam. Water scarce.—*C. A. Magrath*, 1882.
 West, rolling prairie, with a sandy soil. There are small marshes in Sections 6, 19 and 31.—No wood.—*M. Aldous*, 1881.
 East, is a rolling prairie. Soil, light sandy loam. No water; no timber.—*F. W. Armstrong*, 1883.
Sub-division.—The southern tier of sections is dry, undulating prairie, with a good clay soil, and is fair agricultural land. The remainder of the township is principally high-rolling prairie, with a light sandy soil, better suited for grazing than farming. Water is scarce and there is no wood.—*G. Ross*, 1883.
- 13. Outlines.**—North and east, a good level prairie. Soil, good, but in places gravelly; grass is very short; water scarce, except at Little Bow, which runs through the township on its north boundary. The Blackfoot Crossing trail also runs through the township.—*F. W. Armstrong*, 1883.
 The west is rolling. Soil, clay loam, and in some places sandy loam.—*C. A. Magrath*, 1882.
 West, rolling prairie, with a sandy soil. A marsh, about 15 chains wide, in north of Section 19, and a trail from Fort McLeod to Blackfoot crossing, in 6, were intersected.—*M. Aldous*, 1881.
Sub-division —Undulating. Sandy loam soil, 6 to 10 inches deep, on a clay subsoil. Classes 1 and 2, and better adapted for grazing than agricultural purposes, though it will answer well for the latter. The Little Bow River runs through Sections 34, 35 and 36, in the north-east. (River described in Township 14, Range 23). No wood.—*J. F. Snow*, 1883.
- 14. Outlines.**—West, rolling prairie, with a sandy and gravelly soil. Little Bow River passing through a valley about 30 chains wide, crosses in Section 6. No wood on line.—*M. Aldous*, 1881.
 A level prairie. The soil is a rich black loam. Water is scarce, except at the Bow River, which flows westward along the southerly tier of sections. There is no wood in the township.—*F. W. Armstrong*, 1883.
Sub-division.—Undulating prairie. Sandy or clay loam soil on a grey clay subsoil. Class 1; fair for agricultural purposes.

The Little Bow River runs along the southern boundary in a valley averaging three-quarters of a mile wide, and 50 feet under prairie level. At the time of survey (August) the water only stood in pools along the course of the river. No other surface water, and no wood. The McLeod and Blackfoot trail crosses the township.—*J. F. Snow*, 1883.

- 15. Outlines.**—West, dry, rolling plains, entirely without water, and the vegetation, though in many places abundant, dry and withered for want of moisture.—*M. Aldous*, 1881.

East, undulating and rolling prairie. The soil is a sandy loam, with clay subsoil.—*C. E. Wolff*, 1882.

Sub-division—Undulating prairie, of a clay loam on a clay subsoil. Class 2. There are some watercourses, meadows and sloughs, but all dry in September, and there is a spring of good water in Section 32. No wood.—*W. Crawford*, 1883.

- 16 Outlines.**—North, good rolling prairie, with several watercourses, but all dry.—*O. J. Klotz*, 1882.

West, dry, rolling plains, entirely without water, and the vegetation, though in many places abundant, dry and withered for want of moisture.—*M. Aldous*, 1881.

East, undulating and rolling prairie. The soil is a sandy loam, with clay subsoil.—*C. E. Wolff*, 1882.

Sub-division.—Rolling prairie. Soil, clay loam on a clay subsoil. Well adapted for cultivation, were it not for the scarcity of rainfall. No wood.—*W. Crawford*, 1883.

- 17. Outlines.**—The west is a continuous undulating prairie, with clay loam soil, and having a rich vegetation of grass. The south is good rolling prairie, with several watercourses, but all dry.—*O. J. Klotz*, 1882.

East, very undulating. Numerous small coulées and one or two small creeks running south-east to the Little Bow River. The soil is a good sandy loam, with clay subsoil.—*C. E. Wolff*, 1883.

Sub-division.—The west half is good rolling prairie. The east half is broken by ravines and hollows forming the source of Little Snake Creek. The soil is a good quality of clay loam on a clay subsoil. No wood.—*W. Crawford*, 1883.

- 18. Outlines.**—West, is a continuous undulating prairie, with clay loam soil, and having a rich vegetation of grass.—*O. J. Klotz*, 1882.

East, very undulating and greatly cut up with coulées. The soil is a good sandy loam, with clay subsoil. Excellent grazing land.—*C. E. Wolff*, 1883.

Sub-divison—Fine undulating prairie, with some good meadows. Soil, dark clay loam, 6 to 12 inches deep, on a clay subsoil, and class 1. A small but good spring creek crosses the east boundary of Section 9. This township is a fine one for settlement, but is said to want sufficient rainfall. No wood.—*W. Crawford*, 1883.

- 19. Outlines.**—West, in Sections 36 and 25 there is a range of high hills, sloping from about the centre of Section 25. The centre of

the township is rolling prairie; the southern part level. A number of spring rivulets flow from the hills.—*T. Drummond*, 1882.

East, very undulating. The soil is good and the grass plentiful, but on the tops of the ridges the soil is light. No creeks, but a few spring rivulets.—*C. E. Wolff*, 1883.

Sub-division.—Gently-undulating prairie, with a rich black loam overlying clay. There are a few small creeks and fresh-water ponds, which afford a sufficiency of water (1884). There is no wood. This is one of the best townships in the North-West for agricultural purposes.—*J. F. Snow*, 1884.

- 22.** *Outlines.*—Rolling prairie. Soil, black loam, with sandy loam subsoil. This township, south of the railway, is in the Blackfoot Reservation.—*T. R. Hewson*, 1883.

Sub-division.—Mostly rolling, with some undulating prairie. Soil, various, but mostly a black loam, class 1, and resting on a clay subsoil. The Calgary trail crosses this township. Most of this township is in the Indian Reserve.—*J. J. Francis*, 1883.

- 23.** *Outlines.*—West, surface rolling. Soil, generally a light sandy loam, from 10 to 15 inches deep; subsoil, sand and loam. No water.—*W. Ogilvie*, 1882.

Rolling prairie. On the east boundary of Section 12 the line crosses an alkaline slough three-quarters of a mile in width, and on Section 1 the C. P. R. crosses the line. The Railway is the north boundary of the Blackfoot Reservation.—*T. R. Hewson*, 1883.

Sub-division.—Rolling and undulating prairie. Soil, a black loam on a clay subsoil. Classes 2 and 3. The C. P. R. crosses this township, and has two stations—Strathmore and Namaka. Eagle Lake (alkaline) occupies several of the north-west sections, and another alkaline lake parts of Sections 11 and 12. The south-easterly sections—1, 2 and 3—lie in the Indian Reserve.—*J. J. Francis*, 1883.

- 24.** *Outlines.*—North, surface rolling. Soil, clay and gravelly loam, from 10 to 18 inches deep; subsoil, hard clay and sand. A few small ravines are crossed in this range. No water. West, surface rolling. Soil, generally a light sandy loam.—*W. Ogilvie*, 1882.

East, high-rolling prairie. Sandy loam soil, with sandy subsoil.—*T. R. Hewson*, 1883.

Sub-division.—Rolling and undulating prairie. Soil, a rich black loam, 10 to 20 inches deep, on a clay subsoil. There is a good supply of surface water in lakes and marshes which are scattered over the township. The lakes are mostly alkaline. A large alkaline lake, called Eagle Lake, lies in the south-west. Some good hay lands. No wood.—*J. J. Francis*, 1883.

- 25.** *Outlines.*—Rolling country. Soil, heavy hard clay; second class character. Traversed by a small creek.—*T. R. Hewson*, 1883.

South, surface rolling. Soil, clay and gravelly loam, from 10 to 18 inches deep; subsoil, hard clay and sand. No water.—*W. Ogilvie*, 1882.

Sub-division.—Rolling prairie. Soils, sandy loam and black clay loam, on clay subsoil. Classes 1 and 2. The central sections are rather hilly and broken, as also are the north central sections,

and Sections 7 and 8. An alkaline lake lies on the boundary of 8 and 9. Small marshes are numerous and hay and pasture lands are plentiful. Crowfoot Creek—with good water—crosses the township.—*J. J. Francis, 1883.*

- 26. Outlines.**—Rolling country. Soil, clay loam, with clay subsoil.—*T. R. Hewson, 1883.*

Sub-division.—Rolling and undulating prairie, except in and about Sections 6, 7, 16, 14, 12, 26 and 28, which is broken and hilly. Soil, generally class 2. An alkaline lake lies on Sections 8 and 9, and several small creeks cross the township.—*J. J. Francis, 1883.*

- 27. Outlines.**—Open country. Good clay soil. Watered by Savasberry Creek. Well suited to agriculture.—*T. R. Hewson, 1883.*

- 28. Outlines.**—North, rolling and undulating prairie. Soil, clay loam, inclined to dryness. Classes 1 and 2. Marshes and ponds scarce.—*T. Fawcett, 1883.*

Open prairie. Good clay soil. Well adapted to agriculture.—*T. R. Hewson, 1883.*

- 29. Outlines.**—Rolling prairie, crossed by Knee Hill Creek from Section 31 to Section 24, in a valley about 40 chains wide and 50 to 100 feet deep, which is joined by numerous coulées and ravines, many of these being wooded with poplar and willow. Soil, a sandy loam, and would average second class, but there is very little water.—*L. R. Ord, 1884.*

- 30. Outlines.**—Rolling prairie, with long, gentle slopes and broad valleys, but very little water. Soil, sandy loam. Ranks as second class.—*L. R. Ord, 1884.*

- 31. Outlines.**—Rolling prairie, traversed from Section 33 to Section 1 by Three Hill Creek, a stream 20 links wide and 2 feet deep, in a broad, shallow valley. Soil, of fair quality—a sandy loam, with clay loam subsoil, averaging second class.—*L. R. Ord, 1884.*

- 32. Outlines.**—Rolling prairie, crossed by Three Hill Creek from Section 31 to Section 4, in a slight depression. In Sections 13, 24, and on the east boundary, three knolls rising, to about 150 feet over the plain, and known as the Three Hills, form a conspicuous landmark. The soil is good—a sandy loam; ranking first class.—*L. R. Ord, 1884.*

- 33. Outlines.**—Rolling prairie. Soil, sandy loam, with clay loam subsoil. Is nearly all first class.—*L. R. Ord, 1884.*

- 34. Outlines.**—Rolling prairie, with occasional patches of brush. Soil sandy loam. First class.—*L. R. Ord, 1884.*

- 35. Outlines.**—Rolling prairie, partly covered with brush and bluffs of poplar; the southern sections open, and traversed by Devil's Pine Creek, flowing south-east. Occasional ponds dot the surface. Soil, sandy loam, of first class quality.—*L. R. Ord, 1884.*

- 36. Outlines.**—North, rolling country prevails across this township. In certain localities it is hilly, with good soil; in others, the soil is sandy, supporting a poor class of vegetation. Poplar bluffs,

with ponds and swamps fringed with willows, are frequent. The poplar is of fair size, and the bluffs of considerable magnitude. The soil is first and second class.—*T. Kains*, 1883.

Rolling land, with numerous bluffs and brush, and occasional ponds and small lakes. Soil, in places, good, but in others shallow and sandy. Ranks second class.—*L. R. Ord*, 1884.

39. Outlines.—Wooded ridges cross from east to west—the depressions containing more or less ponds, with willows, poplars and prairie openings alternating. A creek crosses diagonally from north-west to south-east—running, on the west half through a fine level flat; but cutting through hills of considerable elevation on the east half. First class, supporting a luxuriant growth of grasses, vetches, pea-vines, &c. Soil. black sandy loam.—*C. F. Miles*, 1884.

40. Outlines.—North, scattered bluffs of poplar and willow. The country is covered with poplar. The line crosses a small creek several times. Gently-rolling. Soil, first class.—*C. A. Magrath*, 1883.

A creek meanders through the northerly tier of sections, which, during the rainy season averaged, about 8 feet in depth and 66 feet in width; otherwise, only 1 or 2 feet in depth and 8 or 10 wide. From this creek there is a slight, gradual, but rolling ascent to the south until about the centre of the township where the woods becomes denser, and the timber—where not destroyed by recent fires—larger, commencing with scrub willow adjoining the creek. The south half again forms a gradual southerly descent, prairie openings alternating with bluffs of poplar, the latter of less magnitude towards either the north or south boundaries. There are numerous ponds, containing good water. Soil, first class, consisting principally of a rich, black sandy loam, excepting the tops of the numerous knolls, which are more of a sandy and gravelly nature, with either clay or sandy subsoil. *C. F. Miles*, 1884.

41. Outlines.—Is divided into the south-west half and north-east half by a good sized stream running in a deep valley, widening towards its outlet. The stream itself widens out into some quite picturesque lakes, in which pike abound. This stream takes its rise in Range 25, and is a feeder of Buffalo Lake—and a very large feeder during the rainy season. This creek flows through a marsh in the south-east corner, which, during the freshets, forms into a good sized lake. This township is well wooded with poplar up to 12 inches in diameter, and a few belts of spruce, and also much grey willow and second growth poplar. This township is rolling and somewhat hilly; but the soil is generally first class, consisting principally of a black sandy loam.—*C. F. Miles*, 1884.

42. Outlines.—May be described as all wooded with, principally, poplar and balm of Gilead, with very few belts (as far as observed) of spruce. The soil is principally a black sandy loam, with numerous muskegs. First class, excepting the north-east quarter, which is second class.—*C. F. Miles*, 1884.

43. Outlines.—Rolling land, commonly wooded with poplar, willow and a few patches of spruce. There are a great number of ponds

and lakelets, and several creeks, discharging into Battle River. The soil is fair, and averages class 2.—*L. R. Ord*, 1883.

Sub-division.—The greater part of this township is rolling land, mostly covered with willow scrub. Numerous small lakes and meadows are found. Poplar as large as 8 inches in diameter can be seen in places. Battle river crosses through Sections 31, 32, 33, 34, 35, 36 and 25. The trail to the settlement crosses the river in Section 36, passing through 25. All the sections in this township, north of the road line, between Sections 12 and 13, are in the valley of Battle River, and are in every way suitable for settlement. In this township the river is very crooked, while the banks are quite low.—*N. R. Freeman*, 1884.

- 44. Outlines.**—North, the soil is generally first class. The country is slightly-undulating, with patches of willows and numerous ponds and swamps, in the vicinity of which beds of alkali were noticed.—*T. Kains*, 1883.

Gently-rolling country, mostly open, with some bluffs of poplar, and in the southern sections, along Battle River, occasional groves of spruce. This township is as fine a strip of land as any in the district.—*L. R. Ord*, 1883.

- 45. Outlines.**—West and east, rolling, and interspersed with patches of willows and many swamps. The soil throughout is of first class quality.—*J. J. McArthur*, 1883.

Sub-division.—The south-easterly part of this township is high-rolling prairie, and the surface soil is 20 to 30 inches deep. The remainder of the township is lower, and slightly undulating, the surface soil being about 12 inches deep, with small patches of alkali near the Bow River trail. As a whole, this township is one of the best in this district, and lying, as it does, on the main highway, is admirably adapted for settlement.—*W. Beatty*, 1884.

- 46. Outlines.**—West and east, for the most part undulating. The Peace Hills are situate near the centre of the township. The Big Stone Creek, 50 links in width, crosses the south-west part. In the neighborhood of this creek there is much poplar and spruce. With the exception of the Peace Hills, the soil is a heavy sand loam, from 9 to 15 inches in depth, with clay subsoil.—*J. J. McArthur*, 1883.

Sub-division.—The north half is timbered with poplar, and in the north-west part there are some scattered spruce. The southern portion contains small bluffs of poplar, willow and intervening places of open prairie. The soil is light in the north-west, but much better in the remainder. Lakes and muskegs are plentifully scattered throughout.—*D. Beatty*, 1883.

- 47. Outlines.**—West, prairie, with a fair soil, timbered with spruce, poplar and willow. A small lake and Pipestone Creek, in Section 19, and small marshes in 18, were intersected; also a creek running east in south of 6. Class 1.—*L. R. Ord*, 1883.

East, rolling prairie, with a third class sandy loam soil, 6 inches deep, with a clay subsoil, covered with poplar, excepting Section 1 and south half of 12, which are open. Sections 24 and 25 are considerably broken by muskegs and marshes, and also by

a small lake in 24. A creek and cart trail in 12, and another cart trail and a small lake in 1.—*J. J. McArthur*, 1884.

Sub-division.—About half of this township is high-rolling prairie, of poor quality, composed of a sandy soil. The remainder of the township is marshy, with a good many muskegs and a few small ponds. There are a few small patches of spruce, of a fair quality, and suitable for building. The Peace Hills Government Farm is located on Section 2. There is but little alluvial soil; even the lower portions are sandy loam. The Bow River trail crosses the township, and is joined there by the Pigeon Lake and the Selway Crossing trails.—*W. Beatty*, 1884.

48. Outlines.—North, rolling prairie, with poplar and willow bluffs, excepting Section 31, which is open—the poplar being from 4 to 12 inches in diameter. Soil, rich black loam, with a clay subsoil. Class 1. Small marshes occur in all the sections, excepting 31. A lake, 8 chains wide, was intersected in 36.—*C. A. Magrath*, 1883.

West, rolling prairie, covered with poplar and willow bush, with some spruce timber in Sections 7 and 18. Soil, in the north, is first class, while in the south it is first and second. A small marsh in 18, and one, about 20 chains wide, in 19, were crossed. A trail leading from Bow River to Edmonton crosses this section.—*L. R. Ord*, 1883.

East, rolling prairie, with a third class sandy loam soil, 7 inches deep, and a clay subsoil. Timbered with poplar, and some spruce and birch. Two small creeks cross in Section 24. Small streams, running east, in 1 and 13, that in 1 having banks 150 feet high.—*J. J. McArthur*, 1884.

Sub-division.—Is unfit for cultivation, being low, wet and sandy. The eastern half is covered with large poplar, cottonwood and some spruce; but this timber is hard to obtain in summer, the place being full of muskegs. The western half is covered with a growth of small poplar and willow.—*W. Beatty*, 1884.

49. Outlines.—West, prairie, with poplar and willow bluffs. Soil, first class. A lake, from 18 to 20 chains wide, is crossed by line between Sections 19 and 30; also telegraph line in 30. There is a small slough in 7 intersected. Poplar bush in northern part of 7.—*L. R. Ord*, 1883.

Sub-division.—Contains very few open places, being nearly all covered with dense poplar, high willows, windfall and burnt timber, with patches of spruce and white birch in the vicinity of the lakes and streams. The south is very low and marshy, while the north is rolling, sandy land. The best portion adapted for settlement lies west of Saunder's Lake.—*W. Beatty*, 1883.

50. Outlines.—West, rolling prairie, with small poplar and willow. A hay marsh and slough in Section 6, and ponds in 7, 18 and 19, were intersected. Black Mud Creek, with willow bush on banks, was crossed several times in 31. Soil, first class, being mostly black clay.—*L. R. Ord*, 1883.

Sub-division.—Timbered with poplar—densely in places—much of which lies fallen and dead. There are openings of high and scrub willow scattered throughout, but in no place is there

any open prairie. The soil, generally, is good. The township is plentifully watered by large and small lakes, muskegs and creeks.—*D. Beatty*, 1883.

- 51. Outlines.**—West, prairie, with a first class soil, covered with dense poplar and willow, intermingled with spruce. In Section 30 a small marsh and a small pond. West of 19 and 31 is considerably broken by Black Mud Creek, having high banks, which crosses near northern boundary. This creek enters and crosses the township from Section 6. In the east, poplar bush and scrub. Lakes in Sections 1 and 13; ponds in 13, 24 and 25; marshes in 36, and the trail from Edmonton to Hay Lakes in 36. South, country having a first class soil, timbered with poplar and willow, intermingled with spruce.—*L. R. Ord*, 1883.

Sub-division.—Timbered with poplar and a few scattered spruce, among which there are openings covered with scrub and high willow and poplar scrub. There is no open prairie, and the soil is generally good.—*D. Beatty*, 1883.

NOTE.—North half of this township is an Indian reserve.

- 52. Outlines.**—West, prairie, with a rich black loam. Soil, class 1, mostly covered with bluffs of small poplar and clumps of willow, also spruce, from 8 to 20 inches in diameter, in the north of Sections 7 and 19. Sections 30 and 31 are broken by the North Saskatchewan River, which crosses both. Small marshes and ponds in 6 and 18. Pigeon Lake trail in north of 18. Small creeks in 6 and 7 were intersected. There are small tracts of broken land in 6 and 31. In the east, bush and scrub, with a few prairie openings. Creeks in Sections 1, 24 and 25. Marshes and ponds occur along the line. In 31 the Fort Saskatchewan trail was intersected.—*C. A. Magrath*, 1883.

Sub-division.—Is nearly covered with high poplar and willows, with a few patches of spruce. The soil is a good alluvial deposit, of from 12 to 16 inches in depth, but is broken by numerous small ponds and marshes, and the Saskatchewan River, which runs through the north-west corner. A portion of the Edmonton settlement is in this township.—*W. Beatty*, 1882.

NOTE.—South half of this township is an Indian reserve.

- 53. Sub-division.**—Edmonton is built upon Sections 3, 4 and 5 of this township. The Saskatchewan River enters the township in Section 3, and after coursing in a north-easterly direction leaves it in Section 1. The land is all of excellent quality, and settlers have a large area under cultivation, chiefly of barley and wheat. The timber in every section is of a size suitable for fencing and fuel, and in many places for building.—*G. A. Simpson*, 1882.

- 54. Sub-division.**—Is a rich black loam, on a clay subsoil, and mostly covered with a thick undergrowth of young poplar and willows, with heavy burnt and fallen poplar in places. There are a few small lakes and hay marshes, with a creek and coulée running through the township. A number of trails cross the township, which is a good agricultural one, and has some settlers.—*G. A. Simpson*, 1882.

55. Sub-division.—The greater portion, that north of the Sturgeon River, is nearly covered with a thick growth of young wood, chiefly poplar and grey willow. It is very much broken by deep ravines, thickly wooded on each side, through which small streams now flow into the Sturgeon River. The soil is of excellent quality. The country on the south of the river is more open, being prairie, scattered with clumps of willow. Soil, a rich loam. The Sturgeon River flows in a north-easterly direction through the lower part of the township. It is very tortuous, with high banks, those on the north being from 100 to 200 feet in height. The current is not rapid and the water is of good quality. Altogether, the township is well adapted for settlement.—*G. A. Simpson*, 1882.

56. Outlines.—North and west, prairie, with a first class soil, timbered with poplar, tamarac, spruce and grey willow. The spruce in some places are from 8 to 30 inches in diameter. Small marshes, ponds and creeks are numerous.—*C. A. Magrath*, 1882.

Sub-division.—About one-tenth is timbered with spruce, of good quality; the remainder with poplar. The greater part of the spruce is in the north-west quarter. The soil is generally light and sandy, and there are numerous marshes.—*D. Beatty*, 1882.

57. Sub-division.—Timbered with poplar and scattered spruce, broken with patches of scrub and willow. The soil is generally light and sandy, but there about two thousand acres in the north-west part of a better quality, and suitable for settlement. The eastern half is, in places, very swampy.—*G. A. Simpson*, 1882.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XXV.

6. *Outlines*.—Is a good grazing lease, but not much adapted to farming. What land there is, fit for settlement, is taken up. The Waterton makes its confluence with the Belly in the northern portion of this township.—*F. W. Armstrong*, 1883.
8. *Outlines*.—The western half of the north line is level, while the eastern half and the east is rolling prairie. Soil, a sandy loam. Trails cross the line in Sections 31, 32 and 33, and extend north and west of the Belly, north of which are also numerous other trails. Timber was seen on left bank of Belly River.—*M. Aldous*, 1881.

West, level and undulating prairie. The soil is a good clay loam, with a clay subsoil.—*C. E. Wolff*, 1882.

Sub-division.—The southern outline of this township runs through land of the poorest description. The south-west angle is in the valley; but immediately to the east the character of the land becomes mountainous, but without much elevation. Towards the eastern boundary of Section 6 the land is fairly level, and continues so until the river is reached; but the soil is very stony. In the centre and in the east the land is much better, being a large proportion of bottom land. There are a few beautiful spring rills, and one or two permanent ponds. North of the cross line the land is a beautiful plain, all first class soil. The Belly River, forming the south-east boundary, has clear, fresh water, low banks and a three-mile current.—*S. L. Brabazon*, 1883.

9. *Outlines*.—West, is very dry, rolling land. The only water is in the Old Man's River, which runs through the north-west quarter of the township, in a valley almost inaccessible in places, and very rocky. There is some poplar and cottonwood timber along the river.—*F. W. Armstrong*, 1883,

East, rolling prairie, with a sandy soil. A trail in 24, and a small marsh in 12, were intersected. Neither wood nor water on line.—*M. Aldous*, 1881.

Sub-division.—Gently-undulating and rolling. Clay and sandy loam soils, on a grey clay subsoil. Classes 1 and 2. The Old Man's River enters by Section 18 and leaves by Section 34. The valley of the river is from a mile to nearly two miles wide, and 100 feet under prairie level, with steep banks, except in Sections 17 and 18, where the valley slopes to the river by an easy descent. The bottom lands of the valley are mainly washdowns from the hillsides, and consist of grey clay on a gravel subsoil. A belt of wood, chiefly poplar and willow of small size, grows along the banks. Fort McLeod (headquarters of the Mounted Police), is built on the south-west extremity of an island formed in the Old Man's River, and forms part of Section 18. The village around

the fort contains a population of about 400. In the vicinity numbers of settlers are engaged in farming, one of whom has 600 acres of well-fenced meadows and pastures, including 100 acres in wheat and root crops doing well. Willow Creek, entering on Section 30, joins the river in Section 29.—*J. F. Snow*, 1883.

- 10. Outlines.**—West, is very dry, rolling land. Soil very light. Some timber on the Old Man's River, which runs diagonally through the eastern half of the township —*F. W. Armstrong*, 1883.

East, rolling prairie, with a sandy soil. Old Man's River in Section 25, and Coal Banks trail to Fort McLeod in 36, were intersected. The soil to the north of river is gravelly. Neither wood nor water beyond the limits of the river.—*M. Aldous*, 1881

Sub-division.—Open and undulating, very much broken by the valley of Old Man's River, and deep ravines opening into it. The soil on the benches is sandy and clay loams, on a grey clay subsoil; on the bottoms it is fine clay washdown from the hills, on a gravelly subsoil. The river enters on Section 3 and leaves by 25; is from 300 to 450 feet broad; 1 to 6 feet deep, with a swift current; meanders through the valley, 125 feet under prairie level, and has steep cut banks, which are difficult of access. There is a belt of poplar growing along the river, which varies from 100 feet to half a mile wide, and is small in size, and only suitable for fuel. There are a few settlers in the township. The trails from McLeod to Blackfoot Crossing, and the high water trail from McLeod to Medicine Hat, cross the township.—*J. F. Snow*, 1883.

- 11. Outlines.**—West, level and rolling prairie. Soil, a clay loam, with a clay subsoil. A few spring marshes —*C. E. Wolff*, 1883.

East, rolling prairie, with a fair sandy soil. There is a small marsh in northern half of Section 25, but generally no surface water on line.—*M. Aldous*, 1881.

Sub-division.—Gently-undulating or undulating prairie, with good clay loam soil on clay subsoil. Class 2. The western part of the township is somewhat gravelly, and broken by a few detached buttes, varying from 30 to 70 feet high, and capped with pure gravel. There are only a few marshes, and there is a fair growth of prairie grass. It is good agricultural land.—*G. Ross*, 1883.

- 12. Outlines.**—North, rolling prairie. Soil, clay loam and, in some places, sandy loam.—*C. A. Magrath*, 1882.

West, level and rolling prairie. Soil, a clay loam, with a clay subsoil. There is scarcely any water along the line, only two small ponds occurring—one in Section 6 and the other in Section 7, and a considerable area of meadow land in Section 30.—*C. E. Wolff*, 1883.

East, rolling in the south and hilly prairie in the north, with a sandy soil. There are insignificant marshes in Sections 1, 24 and 36.—*M. Aldous*, 1881.

Sub-division.—The surface is chiefly gently-undulating prairie, with good clay soil. Sections 24, 25, 26, 35 and 36 are high-rolling prairie, with light sandy soil, broken by ridges 60

feet high. There is a fine hay meadow of large dimensions in Section 13. The whole township, except those parts mentioned, is very suitable for agriculture. The grass is of fair growth. There is no surface water.—*G. Ross*, 1883.

- 13. Outlines.**—West, is very dry, rolling prairie. Soil, light and sandy; grass poor. No timber.—*F. W. Armstrong*, 1883.

South and east, rolling prairie, with a good dark and gravelly soil. Hill tops very gravelly. Surface water scarce. Small marshes in 24, 1, 3 and 5, and the Little Bow River in 36.—*M. Aldous*, 1881.

Sub-division.—Excellent rolling prairie land. Soil, a dark gravelly loam, 8 to 18 inches deep, on subsoils of clay and sand. Classes 1 and 2. The northern tier of sections have several hills, the tops of which are light in soil. The Little Bow River touches Section 36, has low banks, averages 1 foot deep (June), and has a three to four mile current. Surface water elsewhere is scarce. No wood. The river valley is about 20 chains wide. A lake about 30 chains wide, with low lands on east margin, was crossed in 31.—*J. J. Francis*, 1883.

- 14. Outlines.**—West, is a very dry, rolling land. Soil, light and sandy. In Ranges 25 and 26 there is a large lake, the water of which is alkaline. This lake is in Section 6, and the land on both sides, for several miles, is hilly and sandy. Little Bow River flows through this township. No timber.—*F. W. Armstrong*, 1883.

East, rolling prairie, with a sandy and gravelly soil. Little Bow River, passing through a valley about 30 chains wide, crosses in Section 1. No wood indicated on line.—*M. Aldous*, 1881.

Sub-division.—Rolling prairie. Soil, clay and sandy loam, 6 to 10 inches deep, on a clay subsoil. Little Bow River courses the township from the north-west to south-east corners, in a valley 75 feet under prairie level, and about 1,400 feet broad, but sloping so gradually as to make fine farming tracts. The average width of the river is 60 links, and depth 12 to 18 inches, with a swift current and numerous rapids, where mill sites might easily be made and water procured sufficient to run mills to the end of summer.—*J. J. Francis*, 1883.

- 15. Outlines.**—West, is a dry, rolling, open prairie. The grass very poor and no water, except in Little Bow River and Mosquito Creek, which cross the south-west corner. No timber.—*F. W. Armstrong*, 1883.

East, dry and rolling plains, entirely without water, and the vegetation, though in many places abundant, dry and withered for want of moisture.—*M. Aldous*, 1881.

Sub-division.—Fine rolling prairie, composed of a clay loam soil, 6 to 12 inches deep, on a clay subsoil. Class 1. Surface water, generally, scarce. Dry creeks in Sections 34 and 35, and in 36 a small creek running south. Hills were crossed in 32 and 34. Little Bow River crosses the south-west corner, entering by Section 7 and leaving by Section 5, having high banks. No wood.—*J. J. Francis*, 1883.

- 16. Outlines.**—West, is a very dry, rolling, open prairie. The grass very poor and the soil sandy.—*F. W. Armstrong*, 1883.

North and east, dry, rolling plains, entirely without water, and the vegetation, though in many places abundant, dry and withered for want of moisture.—*M. Aldous*, 1881.

Sub-division.—Rolling prairie. Soil, clay loam, 6 to 12 inches deep, on a clay subsoil. Class 1. No surface water existed at the time of survey (August), and there is no wood.—*J. J. Francis*, 1883.

- 17. Outlines.**—West, high-rolling prairie. The soil, a good clay loam, with clay subsoil. The tops of the ridges are generally covered with small boulders.—*C. E. Wolff*, 1883.

East, is a continuous undulating prairie, with clay loam soil, and having rich vegetation of grass.—*O. J. Klotz*, 1882.

South, is good, dry, undulating prairie. The vegetation, though in many places abundant, is withered from lack of moisture.—*M. Aldous*, 1881.

Sub-division.—Mostly rolling, but rather hilly in its southern part, although not sufficiently to be a drawback to farming. A small stream crosses the township on Sections 14, 15, 16, 17, 20 and 19, which dries up before autumn. The soil is a clay and black loam, of 15 to 20 inches deep, on a clay subsoil, and class 1 for farming. Surface water is scarce, but a lasting supply might be obtained in wells.—*G. P. Roy*, 1883.

- 18. Outlines.**—West, low and flat, a good deal of it being covered with from 2 to 4 inches of water. Very soft and boggy. The soil is clay.—*C. E. Wolff*, 1883.

East, is a continuous undulating prairie, with clay loam soil, and having a rich vegetation of grass.—*O. J. Klotz*, 1882.

Sub-division.—A marsh lies on Section 23, which forms the source of a small stream coursing over Sections 19, 30 and 31, but drying up during summer. The township is generally rolling; but is level in the south-west, over a space of two or three miles. The soil is clay and black loams, classes 1 and 2, according to locality and subsoil. A few places are gravelly and sandy.—*G. P. Roy*, 1883.

- 19. Outlines.**—West, rolling prairie, well adapted for farming or grazing purposes, the soil being a good clay loam, with clay subsoil. The country is thickly dotted with small lakes. The grass is plentiful, and of good quality.—*C. E. Wolff*, 1883.

East, in Sections 31 and 30 there is a range of high hills, sloping from about the centre of Section 30. The centre of the township is rolling prairie; the southern part is level.—*T. Drummond*, 1882.

Sub-division.—The north-west corner is inclined westwards; the south-east corner is heavy-rolling, and the balance of the township is a valley occupied by a small stream crossing Sections 4, 9, 16, 21, 27 and 34. Sections 36, 25 and 24 are rather rough, and cut by gullies entering the valley. One of these gullies is very wild looking, and 100 to 150 feet deep. The soil is all class 1, and the water is good wherever found.—*G. P. Roy*, 1883.

- 20. Outlines.**—West, rolling prairie, well adapted for farming or grazing purposes, the soil being a good clay and sandy loam, with clay subsoil. The country is thickly dotted with small lakes. The grass is plentiful and of good quality.—*C. E. Wolff*, 1883.

North, the land is excellent, and has been ranked as first class. The soil resembles the black loam in the Province of Manitoba. East, level prairie, with hills towards the south. Arrow-wood Creek, winding through the north half of Section 13, is crossed by this line at five different points. A branch of this creek, which joins the main stream a short distance east, is also crossed in the south of this section. This line forms the western boundary of Blackfoot Indian Reserve.—*T. Drummond*, 1882.

Sub-division.—Generally rough and hilly. A hill, 150 feet high, covers part of it, running in a north-easterly direction towards the base line. A stream which enters by the south-east corner and again courses over Sections 3, 11 and 13, curves and twists in its course in every conceivable direction, and describes all forms of figures. It contains good water. There is a good supply of fresh surface water in sloughs. The soil is all first class, except on the elevations, which are gravelly.—*G. P. Roy*, 1883.

- 21. Outlines.**—North, the land is all first class, with a rich black clay loam soil. Undulating prairie, except where broken by the Bow River, in the valley of which there is a good supply of cottonwood timber, with very fair spruce on the escarpment of the southern banks. The water in the Bow River is clear as crystal. The river flats are covered with a rich growth of grass. West, rolling prairie, with a first class clay and sandy loam soil, having numerous boulders in Section 6. Sections 6, 7, 18 and 19 slope gradually northward to the Bow River. The north bank is wooded with willow and with cottonwood, from 6 to 20 inches in diameter. South half of 31 is much broken by coulées.—*C. F. Miles*, 1884.

South, the land is excellent, and has been ranked as first class. Soil, black loam.—*T. Drummond*, 1882.

Sub-division.—High, dry and rolling prairie, chiefly adapted for grazing purposes, with a fair amount of good farming lands, and is well watered. Soil is composed of sandy loam, 6 inches in depth, with a clay subsoil, gravelly in places. Four to 12-inch cottonwood, suitable for building, was found on the island in Section 31. Islands in Sections 34 and 35 contain cottonwood and poplar from 8 to 12 inches in diameter. In Sections 32 and 33 are scattered poplar and cottonwood, 4 to 10 inches in diameter.—*J. J. Francis*, 1883.

- 22. Outlines.**—West, undulating prairie, with a black clay loam soil. Hills were intersected in Section 31. Neither wood nor water on line.—*C. F. Miles*, 1882.

Is bounded on the south-east by the Blackfoot Indian Reserve. This part of the township is broken by the Bow River, which crosses from the north of the southerly township. The land is first class. The soil is a black loam.—*T. Drummond*, 1882.

South, the land is all first class, with a rich black clay loam soil. Undulating prairie, except where broken by the Bow River

in the south-east, in the valley of which there is cottonwood and spruce. The water is very clear. The river flats are covered with a rich growth of grass.—*C. F. Miles*, 1882.

Sub-division.—Good rolling prairie, with a fair percentage of good farming land; is well watered; suitable for mixed farming, containing some excellent bottom lands, with good hay. Soil is composed of sandy loam, of an average depth of 6 inches, with a clay subsoil, gravelly in places. There is no timber, except on the Bow River and on the islands, where it consists of poplar and cottonwood as large as 1 foot in diameter principally on General's Island. Petroleum oil is observable on the island in Section 1. With this exception, no indications of minerals were seen.—*J. J. Francis*, 1883.

- 23. Outlines.**—West, rolling country. Ravines in Sections 6 and 7. A grassy slough in 18 and a trail in 6. Wood and water scarce.—*T. R. Hewson*, 1883.

East, surface rolling. Soil, generally a light sandy loam, from 10 to 15 inches deep; subsoil, sand and loam. No water.—*W. Ogilvie*, 1882.

Sub-division.—Rolling prairie, with isolated places inclined to be hilly, but not sufficiently so to prevent almost everywhere being utilized. One hill on Section 10 is an exception; it is rather steep, and about 200 feet high. The C. P. R. crosses the township, and the 16th siding is on the west part of Section 25. The trail from Calgary to Medicine Hat crosses Sections 3, 4, 5 and 6. The soil is first class, being a rich, deep, clay loam, on a clay subsoil.—*G. P. Roy*, 1883.

- 24. Outlines.**—North, surface rolling. Soil, poor, sandy loam; subsoil, hardened clay and sand. There are many small alkaline ponds. East, surface rolling. Soil, generally a light sand loam, from 10 to 15 inches deep; subsoil, sand and loam. No water.—*W. Ogilvie*, 1882.

West, rolling, much broken in Sections 7, 18, 19, 30 and 31 by a saline creek, which is crossed by the C.P.R. in north half of 7. No wood.—*T. R. Hewson*, 1883.

Sub-division.—In the Carcass Hills' country, and is heavily-rolling in consequence. The inclinations are, however, all suitable for agricultural work, and the soil is a rich clay loam, suitable for raising any kind of crops. There are numerous small lakes scattered throughout the township, especially in the east, but nearly all alkaline. The C.P.R. crosses the township from Section 7 to 1.—*G. P. Roy*, 1883.

- 25. Outlines.**—Rolling country, of a third class character. Numerous alkaline sloughs. Soil, sandy and alkaline. Hilly portions were crossed in 18, 19, 30, 31, 13, 24 and 36. No wood.—*T. R. Hewson*, 1883.

South, surface rolling. Soil poor, sandy loam, on clay and sand. There are many small alkaline ponds.—*W. Ogilvie*, 1882.

Sub-division.—Rolling prairie, which becomes more hilly and broken towards the north-east, north and centre; but not sufficiently so to prevent tillage. The south and south-west is gently-

rolling. The soil is mostly a sandy loam on a clay subsoil, and class 2. There is an abundant supply of surface water in small lakes and marshes. Some of the lakes are alkaline. Crowfoot Creek crosses the township. Good for agricultural purposes.—*J. J. Francis*, 1883.

- 26. Outlines.**—All this township appears to be a rolling country, of a third class character. Numerous alkaline sloughs. Soil, sandy and alkaline.—*T. R. Hewson*, 1883.

North, rolling prairie, with sand mounds that cannot be cultivated. There are large ponds with elevated margins; also sloughs and small marshes. No wood.—*G. P. Roy*, 1884.

Sub-division.—Rolling prairie. Soil, a sandy loam on a clay subsoil. Class 2. There are a number of lakes and marshes scattered throughout, the lakes being generally alkaline. No wood. A fair agricultural township.—*J. J. Francis*, 1883.

- 27 Outlines.**—Rolling country; clay soil. There are sandy knolls, which extend on east boundaries of Sections 1 and 12. West, rolling prairie, with hills sloping north and south in Sections 18, 30 and 31. Savasseberry Creek crosses the township, flowing east from 19. No wood.—*T. R. Hewson*, 1883.

Sub-division.—North of the Savasseberry Creek fair second class soil is to be found, except near the Correction Line and in the south-west corner, where it is poor. Sections 9, 10, 11, 14 and 15 are worthless, except for a few bluffs of poplar. The Savasseberry Creek crosses from west to east, and is slightly alkaline, but drinkable. In the south are a few small alkaline ponds. The south is rolling; the north hilly.—*G. P. Roy*, 1884.

- 28. Outlines.**—North, nearly all rolling prairie. Soil, clay loam, 16 inches deep, inclined to dryness, but class 1. Ground rises eastwards.—*T. Fawcett*, 1883.

Rolling country; clay soil; no wood; water slightly alkaline; some hay marshes. A hill, about one mile from base to base, in Section 1.—*T. R. Hewson*, 1883.

- 29. Outlines.**—Open, rolling prairie. Very little water. Soil, sandy loam, of fair quality, ranking second class. A valley, about one mile wide, traversed by Knee Hill Creek, with scrub on shores, was crossed in Section 36; also another narrow valley, with a small creek, in 24.—*L. R. Ord*, 1884.

South, undulating prairie, with a good soil for agricultural purposes. Hills in 5, and small marshes in 5 and 6, were intersected. No wood.—*T. Fawcett*, 1883.

- 30. Outlines.**—Open, rolling prairie. Knee Hill Creek passing through a valley about 30 chains wide, flows across the township from Section 30 to the south-east. There is also a smaller creek passing through a valley about the same width in 18, which is a tributary to the former. North-east of Knee Hill Creek Valley the land is rough and hilly. Soil averages second class.—*L. R. Ord*, 1884.

- 31 Outlines.**—Prairie, rolling in long, sweeping undulations, the land in the centre of the township rising into the Knee Hills, some

250 to 300 feet above the plain. Soil, second class.—*L. R. Ord*, 1884.

- 32. Outlines.**—North, rolling prairie, with a rich soil. Creeks flowing south-east cross Sections 33 and 36. No wood on the line — *E. Bray*, 1883.

Rolling prairie, rising in the south-west half into a spur of the Knee Hills, 100 to 150 feet high, and cut by some few ravines, wooded with small poplar. The soil averages second class, though a great part of the land among the hills is of excellent quality.—*L. R. Ord*, 1884.

- 33. Outlines.**—Rolling prairie. A creek flows south through the eastern section. Soil, sandy loam. First class.—*L. R. Ord*, 1884.

South, rolling prairie, with a rich soil. No wood. Two or three creeks.—*E. Bray*, 1883.

- 34. Outlines.**—Rolling prairie, brushy towards the northern boundary. A creek flows south-east across the township, and a few ponds are found in the western sections. Soil, first class.—*L. R. Ord*, 1884.

- 35. Outlines.**—Rolling prairie, with a few bluffs of small poplar and brush, and numerous ponds fringed with willows. Soil, generally a rich black loam, with clay loam subsoil. First class.—*L. R. Ord*, 1884.

- 36. Outlines.**—North, rolling country. In certain localities it is hilly, with good soil; in others, the soil is sandy, supporting a poor class of vegetation. Poplar bluffs, with ponds and swamps fringed with willows, are frequent. The poplar is of fair size and the bluffs of considerable magnitude. The soil is first and second class.—*T. Kains*, 1883.

Rolling prairie, with bluffs of poplar and brush, and numerous ponds. Devil's Lake, some six miles long and 40 chains wide, crosses the east line in Section 12, lying north-west and south-east, discharging in the latter direction, and well stocked with fish, principally pike. The soil, a deep black loam, is rich and fertile, with a rank growth of grass and pea-vine, ranking first class.—*L. R. Ord*, 1884.

- 38. Outlines.**—West, this line is timbered with poplar, from 4 to 14 inches in diameter, and scattered birch, with clumps of spruce. Red Deer River, passing through a deep valley, from 12 to 15 chains wide, crosses the township from Section 18. Small marshes are numerous.—*M. J. Charbonneau*, 1884.

- 39. Outlines.**—A creek, coming from the west, crosses Section 36, and another from the west leaves this township at Section 13. Between these creeks a low ridge runs east and west, covered with poplar and willows, increasing in extent westwardly. South of the last mentioned creek, the ground rises gradually, forming another low ridge. The south boundary of this township runs along its crest, wooded with large bluffs of poplar and willows, and interspersed with numerous ponds and some prairie openings. The rating of this township is first class, and it is well

adapted both for the cultivation of cereals and grazing purposes—a luxuriant growth of grasses and other vegetation being found throughout. Soil, black sandy loam, with clay and sandy subsoil.—*C. F. Miles*, 1884.

40. *Outlines*.—North, the surface is undulating, with a gradual slope from the west. Scattered bluffs of poplar and willow. Soil, first class.—*C. A. Magrath*, 1883.

A high ridge, with, however, gradual slopes north and south, crosses this township, draining north and south into a creek, both flowing from west to east. The north half, up to the summit of the ridge, is more or less thickly wooded with poplar, and some little spruce and willows; whereas the south half is principally open, with willow scrub. Besides the creeks already mentioned, another runs north-easterly through the north-west quarter of the township. There are excellent flats for haying purposes along the creeks. Soil, generally black clay and sandy loam. First class. *C. F. Miles*, 1884.

41. *Outlines*.—The southerly portion, and a portion extending northerly in a wedge-shaped form to the north boundary, consists of a flat more or less densely covered with willows and willow scrub, and drained by a creek running southerly into another creek running easterly along the south boundary, crossing and re-crossing the same. Much of this land is more or less springy, but there being plenty of fall for drainage, it can all be brought under cultivation. There is a gradual rise to the north-east and north-west, until the tops of ridges are reached, when a thick growth of poplar occurs, alternating, in some places, with second-growth wood and willows, and some few belts of fair sized spruce. Soil, first class, being principally a black sandy loam.—*C. F. Miles*, 1884.

42. *Outlines*.—North, rolling prairie, much broken by small marshes, and covered with a growth of willow. Battle River and a cart trail leading to Edmonton were crossed.—*N. R. Freeman*, 1884.

Is more or less densely wooded with poplar, in places second growth. High ridges cut across in a north-westerly direction, and are densely wooded. Two creeks, running south-easterly, cross the east boundary, the northerly one widening out into a lake between two high ridges, and the southerly one cutting its way through rocky banks of friable sandstone. Some spruce was found along these creeks. Some pike were observed in the above mentioned lake and in the creek discharging from it. Soil, first class, consisting of clay and black sandy loam, with clay subsoil, becoming lighter towards the north boundary.—*C. F. Miles*, 1884.

43. *Outlines*—Rolling, generally covered with willow and bluffs of small poplar, and dotted with numerous marshes and ponds. Some stretches of excellent land lie in the south-west corner, about Battle River. South-east of the river the land is wooded with willow and poplar brush, with occasional open stretches and some little spruce, and numerous ponds and marshes. The soil is class 1.—*L. R. Ord*, 1883.

Sub-division.—This township is mostly rolling land, covered, in places, with poplar, averaging 6 inches in diameter, and willow thickets. It is well watered by numerous lakes and ponds. Most of the lakes having fine grass meadows around them. The Edmonton trail passes through Sections 5, 6, 9, 16, 22, 27, 34 and 35, and the Battle River in Sections 4, 9, 10, 15, 23, 35 and 36. The soil in Sections 13, 18, 20, 24, 27, 28, 29, 30, 31, 32 and 33 is first class, and well adapted for agricultural purposes.

The farms belonging to the Stony Indians adjoin the western line of Section 6. Section 4, east of the river, is timbered with a thick growth of poplar. West of the river is fine rolling prairie. —*N. R. Freeman*, 1884

- 44. Outlines.**—Entering the west side of the township by the north boundary, the country slopes gradually to Bear Creek, which crosses the base in Section 32. After leaving this stream the country gradually rises towards the east to the middle of the range, with small willows, interspersed with patches of fine spruce and poplar. Country of an undulating nature is then crossed, extending one and a-quarter miles, and forming the top of the Bear Hills. It then gradually descends towards the east, and is covered with a growth of very fine spruce and poplar timber, suitable for building and other purposes.—*T. Kains*, 1883.

Rolling country in the western sections, through which Bear Hill Creek flows, draining a number of lakes and muskegs. The surface is about half open, and half covered with woods. Some groves of spruce occur. Eastward the land flattens towards Battle River, where some excellent soil may be seen. Class, average 2.—*L. R. Ord*, 1883.

Sub-division.—Sections 1, 2, 3, 7, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32 and 35 are rolling prairie, which, with their good depth of soil and luxuriant vegetation, are well suited for settlement. In Sections 4, 5, 6, 8, 9, 33 and 36 poplar and spruce of fair size was found. Battle River passes through Section 1, and the Calgary and Edmonton cart trail through Nos. 1 and 2. In Sections 31 and 32 is Bear Creek, a stream 15 links wide and 4 feet in depth. Small lakes and hay marshes are numerous.—*N. R. Freeman*, 1884.

- 45. Outlines.**—West, prairie, with a third and fourth class sandy loam soil, timbered with poplar, willow, and some spruce in Section 6. Low willow swamps are numerous along this line. A creek flowing north into Bear Lake crosses 18, 19 and 30 has low, marshy shores in 30. The northern half of 31 is submerged by Bear Lake (fresh water). East, undulating prairie, with scattered clumps of willow. Soil, a sandy loam, with a clay subsoil. Sections 1 and 12 have a gradual slope to the north-east.—*J. J. McArthur*, 1883-84.

- 46. Outlines.**—West, prairie much broken by Bear Lake, which submerges the whole south-west of the township, and numerous marshes. The soil is a fourth class vegetable and sandy loam soil. This line is timbered with thick willow and poplar bluffs. East, undulating prairie, with clumps of willow and some poplar.

Numerous small marshes. Big Stone Creek crosses in 25. A lake, with a marshy shore, was intersected in 13. Soil, a sandy loam. Class 1.—*J. J. McArthur*, 1833–84.

47. *Outlines*.—West, prairie covered with poplar and willow bush. Soil, first and second class. Section 18 is broken by numerous hills and Pipestone Creek, which flows through a valley about 15 chains wide, in southern half of township. Several ponds here. The east is all prairie, with a fair soil, class 1, and timbered with spruce, poplar and willow. Pipestone Creek in Section 24, and small marshes along the line.—*L. R. Ord*, 1883.

Sub-division.—Is mixed second and third class land, much broken by deep muskegs. There is very little good hay land. The timbered portions consist mainly of poplar and willow, with scattered spruce along Pipestone Creek. The trail from Bow River trail, westward to Pigeon Lake, passes through this township.—*W. Beatty*, 1884.

48. *Outlines*.—North, prairie, with a rich, black clay loam soil, covered with willows, with occasional poplar bluffs. A small creek in Section 31. A small marsh in 33, and Bow River trail in 36. East part of 36 is a boggy plain.—*C. A. Magrath*, 1883.

This township is all rolling prairie, with poplar bush and clumps of willow. In the south-west, Sections 19, 30 and 31 are first class, while 6, 7 and 18 are first and second, 6 and 18 being marshy. In the east the soil to the north is first class, while in the south it is first and second. A trail leading from Bow River to Edmonton crosses Sections 24, 25 and 36.—*L. R. Ord*, 1883.

Sub-division.—Principally covered with small poplar and willow, valuable for local use in fencing and building, and for fuel. There are occasional deep muskegs. The township is well watered by running brooks and small ponds.—*W. Beatty*, 1884.

9. *Outlines*.—West, prairie, having a first class soil covered with willow bush and bluffs of poplar. A small creek running east in Section 30. East, prairie, with poplar and willow bluffs. Soil, first class. A lake, from 18 to 20 chains wide, was crossed between 24 and 25, also the telegraph line in 25.—*L. R. Ord*, 1883.

Sub-division.—Contains land of fair quality in the eastern part, through which the Bow River Trail passes, and is covered with poplar, willows and small openings of scrubby prairie. The western portion is a dense forest of poplar and high willow, with occasional patches of spruce.—*W. Beatty*, 1883.

50. *Outlines*.—North, prairie, covered with poplar and willow bush, interspersed with a few spruce. Soil, first class, except in the north-west, where it is second and third. Muskegs in 31, 32 and 34. White Mud River flows north through the township, and leaves it by Section 33. The rest of the township is nearly all prairie, with a first class soil, which is covered with poplar, willow and some spruce. A branch of white Mud River, also a trail to Edmonton, in 18 and 30. Generally, there is abundance of surface water in hay marshes, sloughs and ponds.—*L. R. Ord*, 1883.

Sub-division.—The western half is low and swampy, and covered with dense poplar and willow, with small patches of

spruce. The east half is more open, and somewhat higher, and is covered with poplar and willow, excepting occasional openings in the vicinity of the Bow River trail. Soil, fair quality. Classes 2 and 3 — *W. Beatty*, 1883.

- 51. Outlines.**—North, prairie, with a first class soil, covered with poplar brush and some white birch. White Mud Creek and Black Mud Creek, passing through valleys about 18 chains wide, were intersected in Section 36. The Saskatchewan River in 33, a small creek running through a narrow valley in 34, and Pigeon Lake trail in 35.—*C. A. Magrath*, 1882.

Prairie, with poplar and willow bush, interspersed with patches of spruce. Section 6 and south of 7 are much broken by the Saskatchewan River, and north of 7, and Sections 18 and 31 by numerous ponds. The soil varies from first to third classes in the west, third in the south-west, and first in the south-east and the east. The Saskatchewan flows from the south-west corner to the north centre of the township, and the north-east is considerably broken by Black Mud Creek, which has high banks.—*L. R. Ord*, 1883.

Sub-division.—Well timbered with poplar, except a narrow strip about half a mile wide, north and southwards, which is covered with scrub and willow, and along which the Pigeon Lake trail passes. White Mud Creek passes through the township on the eastern side. The soil is light and sandy, and generally poor for agricultural purposes, and much dead and fallen timber lies around. The North Saskatchewan River crosses the township from Section 6 to Section 33, and has an average width of 700 feet.—*D. Beatty*, 1883.

- 52. Outlines.**—East and south, prairie, with a rich black loam soil. Class 1, mostly covered with bluffs of small poplar and clumps of willow; also spruce, from 8 to 20 inches in diameter, in north of Sections 24 and 12. Sections 25 and 36 are broken by the North Saskatchewan River, which is crossed in both. Small marshes and ponds in 1 and 13; Pigeon Lake trail in north of 13, and small creeks in 1 and 12, were intersected.—*C. A. Magrath*, 1882.

Sub-division.—Is nearly all covered with poplar and willow, but has some tamarac and spruce of fair size. It is broken by the Saskatchewan River, which runs diagonally across from the south-west to the north-east, and numerous small creeks and coulees emptying into it on the north side, and the White Mud Creek flowing into it from the south. The soil is sandy loam. The Edmonton settlement touches the township on the east side.—*W. Beatty*, 1883.

- 53. Sub-division.**—Is broken by a number of lakes and marshes, and has, in the southern portion, a shaking bog, some miles square, covered with small tamarac. The soil in some portions, particularly along the trail between Edmonton and St. Albert, is very good, while in other parts it is somewhat sandy. The wood is principally poplar and willow, with some birch and spruce. St. Albert settlement occupies the north-west, and borders on Big Lake, a body of water about six miles long, which enters the town-

ship here. The soil in this vicinity is second class. In the south there is some first class soil in Sections 1 and 2. The remainder of line is third and fourth class, being a low tamarac swamp. In the east the soil is a second and third class sandy loam and clay soil, covered with poplar and willow bluffs. Numerous small marshes were crossed.—*W. Beatty, 1882.*

- 54. Sub-division.**—On Sections 4, 5, 8 and 9 is situated the flourishing settlement of St. Albert, containing about six hundred settlers, chiefly French half-breeds. The soil is a rich black loam, with clay subsoil. The Sturgeon River crosses this township in a south-westerly direction. Its average width is about 1 chain. The eastern and southern portions are well timbered, and there are large bluffs of poplar in the remaining portion.—*W. Beatty, 1882.*
- 55. Sub-division.**—The eastern part is timbered with poplar, some of which is large enough for building purposes, while timber sufficient for fencing only is to be found in the west part. There are many very large hay marshes, but no lakes of any size, although there are a number of small ones. The soil is a loam, of from 30 to 36 inches deep, on a clay subsoil, and class 1. As there is so much marsh and hay land, this township is better suited for grazing than farming.—*G. A. Simpson, 1883.*
- 56. Sub-division**—The eastern portion is heavily timbered with spruce and poplar, and along the shores of Egg Lake fir timber, from 12 to 24 inches in diameter, suitable for building. In the west, is dense willow scrub, with poplar bluffs. Nearly 50 per cent. of the township is taken up by swamps and muskegs, but the high land is of excellent quality. The difficulty of access to it, however, renders it unavailable for agricultural purposes. There are several large and a number of small lakes in the township.—*G. A. Simpson, 1882.*
- 57. Sub-division.**—Egg Lake, covering about four sections, lies in the south-west corner, and is connected by a creek with Little Egg Lake, which is to the south-east. Its average depth is about 4 feet. Fir, from 10 to 30 inches in diameter, grows in the eastern part of the township, in a belt varying from half a mile to two miles in width, and mixed with the fir, is poplar of large size. The remaining portion is covered with poplar, suitable for building and manufacturing purposes, and dense willow.—*G. A. Simpson, 1882.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XXVI.

5. *Outlines.*—Is good grazing land, and is divided by Belly River, which runs diagonally through it. What bottoms there are along the river are nearly all taken up. North and west, slightly-rolling prairie, with a first class black loam soil in Sections 35, 36, 6, 7 and 18. The remainder is second class, the soil being stony and gravelly. Belly River, wooded on south bank with poplar and willow, was crossed in 6; also trails in 6, 7 and 18. Waterton River, with steep banks, and wooded on south bank, was intersected in north half of 31; also small creeks in 31, 32, 33 and 36. The east has a black clay loam, with a few surface stones. Class 1. Belly River forms the north-westerly boundary of Blood Indian Reserve, and crosses the township from Section 6 to 25.—*F. W. Armstrong*, 1882-83.
6. *Outlines.*—Is rather broken, but the soil is good. Good grass; well watered by the Waterton. Plenty of timber, chiefly poplar and cottonwood, along the river. West, rolling land, with a second and third class soil. Sections 6 and 7 have a black loam soil. The remainder is stony and gravelly. Small creeks in Sections 6 and 7; also small lakes in 30 and 31. The east has a dark loam stony soil. Sections 1, 24 and 25 are first class; remaining sections second and third. Grass short and poor in 12. Waterton River, with scattered cottonwood on banks, was intersected in north of 13, where it leaves the township, after crossing from 5.—*F. W. Armstrong*, 1882-83.
7. *Outlines.*—North, rolling prairie. Surface uneven and stony. Soil, clay and sandy loam. Third class. Numerous ravines are crossed in 31, 35 and 36. A fine spring in west half of 34.—*S. L. Brabazon*, 1883.
East, gently-undulating. The soil is a good clay loam, with a clay subsoil.—*C. E. Wolff*, 1882-83.
8. *Outlines.*—North, undulating land, with a very gravelly soil. Sections 31 and 32 are much broken by Old Man's River.—*F. W. Armstrong*, 1883.
East, level and undulating prairie. The soil is a good clay loam, with a clay subsoil.—*C. E. Wolff*, 1882-83.
Sub-division.—The south outline of this township is on the side of a rough, uneven hill, called the Hog's Back. Deep coulées and ridges are numerous, and the soil is poor, except in the bottoms, where there is heavy grass. A great deal of this was hay stacked at time of survey (September). The Hog's Back extends about two miles north into the township, when the land becomes better and more level. There are several lasting spring rills of pure water. Hay must always be a valuable commodity here, owing to the proximity of McLeod.—*S. L. Brabazon*, 1883.

- 9** *Outlines.*—West, level and undulating prairie. The soil is a good clay loam, with a clay subsoil.—*C. E. Wolff*, 1882-3.

East, is broken by the Old Man's River and Willow Creek. Along the river bottoms there is some poplar and cottonwood timber. Fort McLeod is partly in this township and partly in Range 25, situated on an island caused by two beds of the stream, along both of which the water flows when high. The soil south of the Old Man's is nothing but gravel; north it is dry, light sand.—*F. W. Armstrong*, 1883.

Sub-division.—Open, undulating prairie, broken by the valley of Old Man's River and Willow Creek. The former enters the township by Section 6 and leaves by Sections 13 and 24, forking and re-forking into several large islands. The valley is about a mile wide, and the banks have an easy slope to the river. Willow Creek enters by Section 31, and flows eastward to Section 36, in a valley from one-half to a mile wide, and 60 feet under prairie level. The creek is about 100 feet wide, 1 to 3 feet deep, and swift. There is a fringe of poplar and willows along the banks. The sections adjacent to Willow Creek are good farming lands, with a sandy loam of good quality on a grey clay subsoil. Outside of the valley of Old Man's River the soil is poor—chiefly gravelly. In the valley the soil is a fine clay loam, and a number of settlers are here engaged in farming operations. There is wood along the river suitable for fuel. Trails run along each bank of the river to Fort McLeod—one from Peigan, the other from Porcupine Hills.—*J. F. Snow*, 1883.

- 10.** *Outlines.*—West, undulating prairie. The soil is a good clay loam, well adapted to farming purposes. In Section 6 the line crosses Willow Creek, in a valley about 100 feet below the prairie level, and in 30 the McLeod and Calgary trail.—*C. E. Wolff*, 1882-3.

Eastwards, the township is a dry, rolling prairie, the soil being a light sandy loam, with some gravel ridges.—*F. W. Armstrong*, 1883.

Sub-division.—Either undulating, gently-undulating or level prairie. Sandy loam soil in places, and clay loam in others, on a grey clay subsoil. Classes 1 and 2; fine for farming, but ranking among the best in the district for grazing. There is no wood, and no surface water, except in Section 6, which is crossed by Willow Creek. Two trails cross the township, the McLeod and Calgary, from Sections 3 to 30, and the Blackfoot Crossing across Section 1.—*J. F. Snow*, 1883.

- 11.** *Outlines.*—West, rolling prairie, with a sandy loam soil. Willow Creek crosses this line at several different points in the southwest. The land to south of creek is flat, and is overflowed during high water. A trail in Section 7, and a small slough in 18.—*T. R. Hewson*, 1883.

East, level and rolling prairie. Soil, a clay loam, with a clay subsoil. No water.—*C. E. Wolff*, 1883.

Sub-division.—Either undulating, gently-undulating or rolling, composed of sandy or clay loam soils, about 8 inches deep, upon a grey clay subsoil, class 1, the growth of grass being

good, considering the dry season. There is no wood, and, at the time of survey (September), no surface water.—*J. F. Snow*, 1883.

- 12. Outlines.**—North, rolling prairie. Soil, clay loam, and in some places sandy loam.—*M. Aldous*, 1880

West, unbroken rolling prairie, with a sandy loam soil.—*T. R. Hewson*, 1883.

East, level and rolling prairie. Soil, a clay loam, with a clay subsoil. There is scarcely any water along the line. Only one small pond in Section 12, and meadow on 25.—*C. E. Wolff*, 1883.

Sub-division.—Gently-undulating. Soil, good sandy or clay loam, on a clay subsoil. Classes 1 and 2. Well adapted for grazing and farming purposes, particularly the former, unless the want of surface water (surveyed in September) is an objection. No wood.—*J. F. Snow*, 1883.

- 13. Outlines.**—West and east is very dry, rolling prairie. Soil, light and sandy; grass poor; no timber.—*F. W. Armstrong*, 1883.

Sub-division.—Gently-rolling prairie, with a few small buttes. Soil, dark sandy loam, 4 to 10 inches deep, on a hard clay subsoil. Classes 1 and 2, and generally good agricultural land. No surface water.—*John Francis*, 1883.

- 14. Outlines.**—Is very dry, rolling land. Soil, light and sandy. On the east line there is a large lake, the water of which is alkaline. The land on both sides of the lake is hilly and sandy.—*F. W. Armstrong*, 1883.

Sub-division.—Rolling prairie. Soil, clay and sandy loams, 6 to 18 inches deep, on a clay subsoil. Classes 1 and 2. Surface water scarce, except in a lake covering part of Section 1. No wood.—*John Francis*, 1883.

- 15. Outlines.**—West and east is a dry, rolling prairie, Soil, sandy; the grass fair. Little Bow River and Mosquito Creek both flow through the township, the one from the north centre and the last from the west centre, and both converge and flow out on Section 12.—*F. W. Armstrong*, 1883.

Sub-division.—The north is heavy-rolling prairie, with a first class sandy loam soil, and a few stones in places. In general, however, the township is fine, rolling prairie. Soil, clay loam, 8 to 12 inches deep, on a clay subsoil. Watered by Little Bow River and Mosquito Creek, upon which there exists some very fine slopes of land. There are some fine sandstone beds on both the creek and the river, suitable for building purposes. No wood.—*John Francis*, 1883.

- 16. Outlines.**—North, rolling prairie, with a gravelly soil. Little Bow River, passing through a valley about 40 chains wide, was crossed in Section 31. No wood.—*M. Aldous*, 1881.

West and east is watered by Little Bow River. The land is rolling; grass fair; no timber.—*F. W. Armstrong*, 1883.

Sub-division.—Rolling prairie. Soil, principally clay loam, 6 to 12 inches deep, on a clay subsoil. Watered by the Little Bow River, which (July-August) is a succession of pools, connected by narrow and small rivulets. The banks of the valley

slope gently to the river through Sections 16, 20, 29 and 31, and, having fine soil, will make good farming lands. No wood.—*John Francis*, 1883.

- 17. Outlines.**—West, rolling and level. The soil, a good sandy loam, with clay subsoil. A few shallow ponds along the line. In Section 18 Little Bow River was crossed, running south-east, in a valley about 75 feet deep, and very rapid current; water, 1 foot deep. East, high-rolling prairie. The soil, a good clay loam, with clay subsoil. The tops of the ridges are generally covered with small boulders.—*C. E. Wolff*, 1883.

Sub-division.—Rolling prairie, with a soil nearly all first class, except on the tops of the hills and ridges, which gravelly. The Little Bow River passes through the southwestern part, and contains the only permanent surface water in the township—*G. P. Roy*, 1883.

- 18. Outlines.**—West, rolling and level. The soil a sandy loam, with clay subsoil. Some small ponds and marshes. East, low and flat, a good deal of it being covered with from 2 to 4 inches of water; very soft and boggy. The soil is clay.—*C. E. Wolff*, 1883.

Sub-division.—Except a large slough on Sections 21 and 28, no surface water (September) was found; and although the soil is a first class clay loam, 10 to 18 inches deep, the grass was short, owing to want of rain. The season (1883) was a dry one, but a scarcity of moisture in the atmosphere is reported as usual in this section of country. The surface of the township is generally rolling. Section 1 is meadow land.—*G. P. Roy*, 1883.

- 19. Outlines.**—West, undulating prairie. The soil is a good sandy loam, with a clay subsoil. East rolling prairie, well adapted for farming or grazing purposes, the soil being a good clay and sandy loam, with clay subsoil. The country is thickly dotted with small lakes. The grass is plentiful, and of good quality.—*C. E. Wolff*, 1883.

Sub-division.—Rolling and undulating prairie. Soil, mostly a rich clay loam on clay subsoil, but class 2, on account of the want of water. Gravel and sand were found in some places. Some sloughs were in existence when surveyed in July, but none remained in September. Under a favorable rainfall the soil ought to produce rich crops.—*G. P. Roy*, 1883.

- 20. Outlines.**—North, the land is excellent, and has been ranked as first class. The soil is a good black loam.—*T. Drummond*, 1882.

West, undulating prairie. The soil is a good sandy loam, with a clay subsoil. There are numerous small ponds or hay marshes scattered over this township. East, rolling prairie, well adapted for farming or grazing purposes, the soil being a good clay and sandy loam, with clay subsoil. The country is thickly dotted with small lakes. The grass is plentiful, and of good quality.—*C. E. Wolff*, 1883.

Sub-division.—A hill, 150 or 200 feet high, rises on Sections 10, 11, 14 and 15, from which all the surrounding country may be seen. This hill has, however—except near its summit, on the east, which is rather steep—a gentle slope, offering no obstruction

to the plough. The rest of the township is rolling. Towards the north the surface is rough, with gravel ridges. Towards the south the soil is good, and well watered, being a clay loam on a clay subsoil, and class 1. It is specially good in the west part, and offers many advantages to the agriculturist. The water in the sloughs is good, but most of them probably dry up during the summer. No wood.—*G. P. Roy*, 1883.

- 21. Outlines.**—The land is all first class, with a rich black clay loam. Undulating prairie, except where broken by the Bow River, in the valley of which there is a good supply of cottonwood timber. with very fair spruce on the escarpment of the southern banks. The water in the Bow River is clear as crystal. The river flats are covered with a rich growth of grass, and the country gradually rises with an easy slope for several miles southward from the river. In the east there are numerous boulders in Section 1. The north bank of the river is wooded with willow and cottonwood, from 6 to 20 inches in diameter, and the south half of 36 is much broken by coulées.—*C. F. Miles*, 1882.

Sub-division.—Rolling and undulating prairie, chiefly adapted for grazing, with a fair percentage of farming land. Well watered. Soil is light, being composed of sandy loam, mixed, in places, with gravel, 6 inches deep, with a clay subsoil. No timber, except on the Bow River, along which spruce, cottonwood, poplar and willow brush were found. In Sections 22 and 23, north bank of river, 4 to 12-inch cottonwood was found, suitable for building. In Nos. 24, 17 and 18, south bank of river, are scattered spruce, 6 inches in diameter. On the whole, the township is suitable for mixed farming.—*J. J. Francis*, 1883.

- 22. Outlines.**—The land is all first class, with a rich black clay loam soil, and undulating prairie.—*C. F. Miles*, 1882.

Sub-division.—Rolling prairie. Soil, a black loam, of 4 to 12 inches deep, on clay and sandy clay subsoils. Nearly all class 1 for agricultural purposes. There is a fair supply of surface water in small sloughs and marshes (August), and there is no wood. A good township, and convenient to the C.P.R. and Calgary trail and Saskatchewan River. The north-east corner is in the Carcass Hills.—*J. J. Francis*, 1883.

- 23. Outlines.**—Surface, rolling prairie. Soil, black loam, with sandy loam subsoil, except in the neighborhood of small creeks, tributaries of the Rosebud River, where it is alkaline. The north-western portion of this township is crossed by the C.P.R.—*T. R. Hewson*, 1883.

Sub-division.—Easy-rolling prairie, in many places almost level. The C.P.R. crosses Sections 19, 30, 29, 33 and 34. The Medicine Hat and Calgary trail also crosses the township. Water is scarce (surveyed in September), but what there is is good. The soil is a rich and deep clay loam, resting on a clay subsoil, and class 1 for agricultural purposes.—*G. P. Roy*, 1883.

- 24. Outlines.**—North, surface rolling. Soil, light sandy loam; subsoil, hardened clay. The beds of many small dry creeks run through this range.—*W. Ogilvie*, 1882.

Surface, rolling prairie. Soil, black loam, with sandy loam subsoil, except in the neighborhood of some small creeks, tributaries of the Rosebud River, where it is alkaline. The south-eastern portion of this township is crossed by the C.P.R.—*T. R. Hewson*, 1883.

Sub-division.—Rolling prairie. Fair soil and little water are the main features of this township. Situated on the Carcass Hills; the rolling merges into hilly prairie in many places. The soil is a clay loam, mostly class 1, and although the surface is hilly in many places, especially northwards, the inclination of the hills is slight and offers no obstacle to agriculture. The C.P.R. crosses Sections 3, 2, 11 and 12. The station here is named Cheadle.—*G. P. Roy*, 1883.

- 25. Outlines.**—Rolling country. Soil, of second class character, being a sandy loam, with a hard clay subsoil. Township is traversed by a small creek, which is a tributary of the Rosebud River. Several dry creek courses. Some deep sloughs in the north-east corner.—*T. R. Hewson*, 1883.

South, rolling prairie. Soil, light sandy loam. Many small creeks, but all dry.—*W. Ogilvie*, 1882.

Sub-division.—Soil, class 2, generally, but gravel and boulders are embedded in some places; while, more particularly in the western part, there is a rich black loam. The surface is level in the south, but rolls heavily towards the north. Water is scarce, having been only found in a few sloughs.—*G. P. Roy*, 1884.

- 26. Outlines.**—Rolling country. Soil, of second class character, being a sandy loam, with hard clay subsoil. Numerous alkaline sloughs.—*T. R. Hewson*, 1883. •

Sub-division—A large number of small lakes, which are all alkaline, dot the surface. The water in the sloughs is fresh. The soil is second class, and of fair quality, although it is a light sandy loam. Gravel patches occur, especially in the west. The surface is rolling and level prairie.—*G. P. Roy*, 1884.

- 27. Outlines.**—Rolling prairie. Soil, first class. There is a small creek running through this township, which is a tributary to the Savasseberry Creek. The line strikes it on west boundary of Section 7. The main creek crosses the north-east quarter of the township. Well suited for agriculture.—*T. R. Hewson*, 1883.

Sub-division.—Rolling prairie. Soil, sandy loam and, in places, clay and black loams. Classes 2 and 3. There are a few small lakes containing alkaline water and a large marsh of soft water in Sections 5, 6, 7 and 8. There is fresh water in the sloughs in the south-west. Savasseberry Creek enters on Section 35, and crosses south-east, leaving on Section 24. The water is slightly alkaline. A tributary of this creek enters on Section 18, crosses 17 and 20, where it enters a 40-foot gully, in which it courses to Section 28, and then joins the creek in 27.—*G. P. Roy*, 1884.

- 28. Outlines.**—North, nearly all rolling prairie. Soil, clay loam, 16 to 20 inches. Class 1. A few scattered marshes. Generally good agricultural land.—*T. Fawcett*, 1883.

Level prairie. Soil, first class. At 10 chains on east boundary of Section 1 the line strikes a hay marsh which continues up to 41 chains on the same section. Well suited to agriculture.—*T. R. Hewson*, 1883.

Sub-division.—Very hilly and irregular, being crossed by the Red Deer River, the banks of which are wide apart, and from 150 to 250 feet high. The soil consists of a rich black loam on a clay subsoil, and class 1, except on the hills, where it is sandy. Poplars, from 3 to 14 inches in diameter, cover the surface, and intermingle with a few clumps of spruce and birch.—*M. J. Charbonneau*, 1884.

- 29. Outlines.**—Rolling prairie. Soil, sandy loam, of fair quality, ranking first and second class. Very little water.—*L. R. Ord*, 1884.

- 30. Outlines.**—Rolling prairie, drained by some small creeks. Soil, second class. Lone Pine Creek, a tributary of Red Deer River, flows in a south-easterly direction through the north-east portion of this township.—*L. R. Ord*, 1884.

- 31. Outlines.**—Rolling prairie, crossed by two creeks flowing south-east. One or two small, brackish lakes occur, but, as a rule, the township is dry. Soil, fair. Second class.—*L. R. Ord*, 1884.

- 32. Outlines.**—North, rolling prairie, having a rich soil. Hills in 31 and 36, a marsh in 32, and a creek, running south, in 33, were intersected. No wood on line.—*E. Bray*, 1883.

Rolling prairie, rising into hills near the east line, and drained by a small creek, flowing south, in a valley about 100 feet deep. Soil, second class.—*L. R. Ord*, 1884.

- 33. Outlines.**—Rolling prairie, crossed by a creek flowing south. Soil, second class—a sandy loam, with clay and clay loam subsoil.—*L. R. Ord*, 1884.

- 34. Outlines.**—Rolling prairie, brushy towards the northern boundary, and dotted with a few grassy ponds. Soil, first class.—*L. R. Ord*, 1884.

- 35. Outlines.**—The southern part of this township is rather heavily timbered. The soil is generally first class, with occasional patches of second and third class land.—*T. Kains*, 1883.

Rolling prairie, with bluffs of small poplar and brush. Soil, first class.—*L. R. Ord*, 1884

- 36. Outlines.**—North, the first part of this range is rather open country, with a few dry swamps. High buttes and ridges, the slopes of which are covered with a dense growth of poplar, from 4 to 8 inches in diameter, were met with. Vegetable mould, supporting a heavy growth of grass and pea-vine, shows the character of the soil, but the country is rather too hilly to be marked first class farming land. West, is almost covered by a growth of fair sized poplar. The soil is generally first class,

with occasional patches of second and third class land.—*T. Kains*, 1883.

Sub-division.—Partly covered with clumps of poplar and underbrush. The centre is a fine open prairie, with excellent hay marshes. The water in the creeks and lakes is fresh and good. The soil is first class, except on the northern and western boundaries, which are hilly. In the east it is a sandy loam in Sections 25 and 36, and a black loam southwards and south-westwards from here.—*M. J. Charbonneau*, 1884.

- 37. Outlines**.—West, this township is comparatively open, undulating country, with scattered clumps of poplar and willow. The soil is generally first class, with occasional patches of second and third class land. In the south the soil is of a vegetable mould, supporting a heavy growth of grass, but too hilly to be marked first class farming land.—*T. Kains*, 1883.

Sub-division.—The northern and eastern parts are crossed by a range of very high hills, covered with wood. The south boundary also runs over another range of hills. Between these hills is a valley of about four miles wide, which has first class soil and some fine hay meadows. The soil on the hills is class 2. This township is well suited for both farming and grazing. Clumps of poplar, 4 to 8 inches in diameter, are scattered about.—*M. J. Charbonneau*, 1884.

- 38. Outlines**.—West, the south-west of this township is comparatively open, undulating country, with scattered clumps of poplar and willow. The balance is heavily timbered with poplar, from 4 to 10 inches in diameter. The soil is generally first class, with occasional patches of second and third class land.—*T. Kains*, 1883.

Sub-division.—The Red Deer River crosses this township, flowing from Section 32 to 13, in a deep valley, from 12 to 15 chains wide, which is entered by several ravines. The banks of the river are from 200 to 300 feet high. North and south of the river, the eastern half of the township is rolling prairie; in the north it is covered with poplar, from 4 to 14 inches in diameter, with scattered birch and clumps of spruce, and the soil a second class black loam. The same soil prevails south of the river, on this side, but the country is not so heavily timbered, and in Sections 1 and 12 is quite open. The west half of the township is very hilly, and covered with thick willow and large poplar. The soil here is good, but the roughness of the surface is unfavorable to agriculture.—*M. J. Charbonneau*, 1884.

- 39. Sub-division**.—Is crossed by the Red Deer River in the south west corner. The land is rolling, and composed of sandy loam on a sandy subsoil, and fairly adapted for agricultural purposes. It is partly covered with poplar—averaging 5 inches in diameter—and thick underbrush. The north is rolling land, with alternate prairie, and thick willows and poplar, from 4 to 8 inches in diameter. Soil, second class sandy loam. The west is rolling land, with alternate prairie, and clumps of poplar, with a few spruce in Section 31, from 4 to 8 inches in diameter. Sections 19, 30 and 31 have a first class sandy loam soil; remainder is second class.

In the east there is poplar from 2 to 8 inches in diameter. Soil, second class sandy loam, with a sand subsoil. Sections 13 and 25 are very low and wet, and covered with thick willow.—*M. J. Charbonneau, 1884.*

- 40.** *Outlines.*—North, low ridges run north and south. A very superior flat of land. The woods consist of scattered bluffs of small poplar, willow scrub, and a belt of spruce, cottonwood and poplar. Soil, first class.—*C. A. Magrath, 1883*

The west and south is alternate prairie and poplar bush, from 2 to 14 inches in diameter. Soil, a second class black loam, with a clay subsoil. A lake, 25 chains wide, was crossed in Section 31. Small marshes are numerous all along the line. A trail to Calgary in 19. The east is covered with thick poplar and willow bush. Soil, black loam. Second class. Several small marshes, also a small lake and a creek, were crossed.—*M. J. Charbonneau, 1884.*

- Outlines.*—Is more or less thickly dotted with willow and willow scrub, and some few poplar bluffs. The south-west corner is somewhat broken by knolls, ridges, ponds and poplar bluffs. Wolf Creek meanders north-westerly through the westerly half, in a nice flat, affording excellent hay. Another creek, emptying into Wolf Creek, runs north-easterly through the westerly portion. The Calgary and Edmonton trail also runs northerly and south-easterly. The east half is more or less wooded with poplar, principally second growth, and belts of fair spruce. The land is generally undulating, becoming more rolling towards the north. West of Wolf Creek the soil is principally black sandy loam. East of the creek it is clay loam on a clay subsoil.—*C. F. Miles, 1884.*

- 42.** *Outlines.*—The south half is well wooded with poplar and some little spruce, and is more or less rolling, with low, sandy ridges, running east and west. The north half, undulating, and covered principally with willow scrub and some willows. Soil, sandy loam, growing lighter, however, towards the Battle River, which enters from the north and leaves again at Section 36. This river has a width of about 5 rods, with an average depth of about 18 inches. First class.—*C. F. Miles, 1884.*

- 43.** *Outlines.*—Rolling land, mostly covered with small poplar, a great deal of willow and some spruce. Battle River crosses from Section 30 to 3, and a strip of good land follows its course and extends through the eastern part of the township. Across the river, in the south-west corner, the land is not so good, being somewhat marshy, dotted with muskegs, and wooded with poplar and willow of small size, and groves of spruce.—*L. R. Ord, 1883.*

- 44.** *Outlines.*—North, undulating country, thickly timbered with small poplar, from 2 to 8 inches in diameter, and dotted with clumps of spruce. Numerous muskegs.—*T. Kains, 1883.*

Rolling country, wooded with small poplar, willow and spruce, in patches and groves. The land is generally low and marshy, and dotted with muskegs; but towards the east line improves in quality, and becomes drier. Average, second class.—*L. R. Ord, 1883.*

Sub-division.—Land generally undulating. The north half is a network of muskegs, the work of beavers, in many instances. The largest of these is formed by draining a small stream which is still open at the north outline of the township. Another stream, with a westerly course, rises in the marshes in Section 9. A few sections in the north-west and north-east quarters have been run through by fire, and have some open prairie, but elsewhere the land is wooded with poplar, about 6 inches in diameter, and in the north a few clumps of spruce. The marshes are fringed with an almost impenetrable growth of willow. The soil is a black loam on clay, and a good second class.—*J. A. Kirk, 1884.*

45. *Outlines.*—West, prairie, much broken by muskegs and marshes, with poplar and thick willow intervening. Soil, sandy loam, averaging 8 inches deep, on a clay subsoil. Class 3. A small creek crosses in Section 7. East, prairie, with a third and fourth class sandy loam soil, timbered with poplar, willow and small spruce in Section 1. Low willow swamps are numerous along this line. A creek flowing north into Bear Lake, across 13, 24 and 25, has low marshy shores in 25. The northern half of 36 is submerged by Bear Lake (fresh water).—*J. J. McArthur, 1884.*

46. *Outlines.*—This township is prairie, timbered with poplar and willow, and, in Sections 30 and 31, intermingled with spruce. In the west, marshy creeks were crossed in 6, 7 and 18. A creek running through a coulée, 100 feet deep, with poplar and spruce on its shores, crosses in 30, and a cart trail at the base of the northern bank. Soil, sandy loam, 8 inches in depth, with a clay subsoil. Class 3. In the east, a fourth class vegetable and sandy loam soil. Parts of Sections 1, 12 and 13 are submerged by Bear Lake. A small lake in 24 and a creek in 25, both having marshy shores, were intersected.—*J. J. McArthur, 1884.*

47. *Outlines* —West, prairie, broken by muskegs and marshes ; timbered with poplar and willow, and, in Sections 7 and 18, with spruce. Creeks and cart trails were crossed in 6 and 7. Soil, sandy loam, except 31, which is vegetable loam, with a clay subsoil. Class 3.—*J. J. McArthur, 1884.*

East, prairie, covered with poplar and willow bush. Soil, first and second class. Pipestone Creek, which runs through a valley about 15 chains wide across the southern half of township, leaves by Section 13. A pond, from 5 to 6 chains wide, was intersected in this Section.—*L. R. Ord, 1883.*

48. *Outlines.*—North, country covered with small poplar and high willows, with occasional patches of open prairie. A few spruce in east of 36. Soil is first class black loam, having a clay subsoil. A creek in 32 and another in 35, both running north.—*C. A. Magrath, 1883.*

West, prairie with a third class sandy loam soil, covered with scattered poplar and willow, with some birch in Section 7. Conjuring Creek winds through this section, and is crossed in 18, 19, 30 and 31. Marshes in 6 and 31, also Pigeon Lake trail in 31.—*J. J. McArthur, 1884.*

East, rolling prairie, with poplar bush and clumps of willow. Sections 24, 25 and 36 are first class, but remainder varies from first to second, 1 and 13 being muskegs.—*L. R. Ord*, 1883.

- 49. Outlines.**—North and west, country timbered with poplar, spruce and tall willows. Soil, second class.—*D. Beatty*, 1883.

East, prairie, having a first class soil, covered with willow bush and bluffs of poplar.—*L. R. Ord*, 1883.

South, bluffs of small poplar, high willows and some spruce. Soil, is a first class black loam, with a clay subsoil.—*C. A. Magrath*, 1883

- 50. Outlines.**—East, prairie, with a first class soil, excepting 36, which is marshy. The line is covered with poplar and willow bush, interspersed with patches of spruce. A small pond and muskeg, a branch of White Mud River, and a trail to Edmonton, were all crossed in 12.—*L. R. Ord*, 1883.

Sub-division.—Timbered throughout with poplar, excepting where there are some willow patches of scrub and dry muskegs. The soil is classes 2 and 3 and generally too light for agricultural purposes. The Saskatchewan River enters on Section 31 and leaves on 33, but again enters and passes out on Section 35.—*D. Beatty*, 1883.

- 51. Sub-division.**—Well timbered with poplar, and broken by a few lakes and many muskegs. The North Saskatchewan River passes through a portion of the south part, entering on Section 3 and coursing east, about a-quarter of a mile north of the Correction Line, and passing out on Section 1, to enter it again on the east boundary, along which the river courses for a mile before leaving. The soil of the township is generally sandy, and not suited for settlement.—*D. Beatty*, 1883.

- 52. Sub-division.**—This township is rolling prairie, timbered with thick willow and small poplar, with some tamarac and spruce in the west and south-west. Soil, sandy loam in the north, and rates from first to second class. Other parts alternate with some second class between third and fourth class, in many places being a pure sand. The western part of 36 is brulé, fallen timber and dense scrub. The surface is broken by marshes of considerable extent, and by small ponds. Sand Lake, on Sections 14, 15, 22 and 23, is a fine body of fresh water, and is said by the Indians to afford good pike fishing.—*W. Beatty*, 1882.

- 53. Sub-division.**—Rolling prairie, timbered in the north with poplar, willow and spruce, interspersed with patches of prairie. Soil, second and third class. In the west, timbered with large poplar, tamarac and spruce, with clumps of willow and patches of open prairie. Soil, third and fourth class alluvial soil, 16 inches deep, with clay and sandy subsoils. In the east, there are poplars and high willows, scattered around the tamarac and spruce swamps. Soil, second and third class. The southern portion is of second class quality. Adjoining this, and south and west of Big Lake, is a large tract of swampy land. North of the lake the land is good, and is occupied by the St. Albert Settlement. Big Lake covers

about three thousand acres. The water is shallow and brackish.—*W. Beatty, 1882.*

- 54.** *Sub-division.*—The Sturgeon River, a stream about 75 links wide, with a sluggish current, enters the township near the north-west angle, and passes out near the south-east. There is some good spruce and poplar along the river, but hardly enough for the use of the settlers. The greater part is scrubby prairie, with clumps of poplar and willow. Soil average second class.—*W. Beatty, 1882.*

- 55.** *Outlines*—South, unbroken prairie, with bluffs of high willow and poplar.—*W. Beatty, 1882.*

Sub-division.—The soil is chiefly classes 2 and 3, there being much alkali. The west is a rolling country, covered with grey willow, poplar bluffs and small scrub. Soil, a first class clay loam in all, excepting Sections 6 and 7, which is second class, being a sandy loam. River Qui Barre, which winds through 7 and crosses the line at several points, is 30 links wide, 3 feet deep, with a muddy bottom and banks 10 feet high. Parts of Sections 6 and 7 are occupied by a Government farm. The eastern part is more level, and supports a growth of willow scrub and bluffs. There are a few good hay swamps and a few small lakes.—*G. A. Simpson, 1883.*

- 56.** *Sub-division.*—Rolling surface, covered with heavy poplar bluffs and grey willow, among which there is a considerable quantity of fallen timber. Water is plentiful, especially in the north-eastern half of the township. The soil is first class clay loam, averaging 16 inches deep, with a clay subsoil.—*G. A. Simpson, 1883.*

- 57.** *Outlines.*—South, prairie, covered with tall willow and scattered poplar. Soil, a first class rich black loam, with a clay subsoil. Sections 2, 3 and 4 are much broken by lakes. A small creek, 10 links wide, draining a small marsh in 3, and a marsh, 9 chains wide, in 6, were intersected.—*C. A. Magrath, 1882.*

Sub-division.—The north-eastern portion is heavily timbered with poplar, spruce and tamarac, and contains many muskegs and marshes. The balance of the township is covered with a growth of small poplar and willows, and a few spruce. The soil is mostly very sandy, and but a small portion fit for cultivation. The timber is excellent for building. In the east the soil is better than elsewhere, being nearly first class. Sections 12 and parts of 1 and 13 are submerged by Egg Lake.—*G. A. Simpson, 1882.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XXVII.

3. *Outlines.*—Except south and north-east, this township is part of the Blood Indian Reserve.—*F. W. Armstrong*, 1883.
4. *Outlines.*—Is broken by two large lakes, around which are some good hay marshes. Belly River divides the township in two. There are some good bottoms along the river flats, and good timber. There are some squatters along the river.—*F. W. Armstrong*, 1883.
5. *Outlines:*—Is well watered by both the Waterton and Belly Rivers. The land slopes both ways to the rivers, from a ridge running about midway. The soil is light, but the grass is good, though not long. Daywood Creek in the northern half of Section 30. Creeks of smaller dimensions were crossed in Sections 19 and 31, and clear-water lakelets in Sections 6 and 7. Bush was observed on the banks of Waterton River and Daywood Creek.—*F. W. Armstrong*, 1883.
6. *Outlines.*—Unwooded prairie, with numbers of ravines, some creeks and small lakes. The northern part of this township is in the Peigan Reserve.—*F. W. Armstrong*, 1883.
8. *Outlines.*—North, undulating prairie, with poor soil and scant vegetation. Porcupine Hills, and a trail to Fort McLeod, were crossed in Section 31. Old Man's River, the banks being wooded with poplar and willow, crosses in 33, 34 and 36.—*M. Aldous*, 1881.
9. *Outlines.*—West, in the Porcupine Hills. Rough and stony. East, level and undulating prairie. The soil is a good clay loam, with a clay subsoil. In Section 24 a lake is crossed, about a mile wide and two miles long.—*C. E. Wolff*, 1882-83.

South, undulating prairie, with poor soil, and scant vegetation. Porcupine Hills, and a trail to Fort McLeod, were crossed in Section 6. Old Man's River, the banks being wooded with poplar and willow, crosses in 1, 3 and 4.—*M. Aldous*, 1881.

Sub-division.—The westerly portion is mountainous, as the Porcupine Hills extend in a northerly direction along the westerly boundary. The north-east portion is swampy, and the centre is a succession of rolling ridges, with gravel tops and low flats between. Along the southern boundary and Old Man's River is a level, useless, gravel ridge, about a mile wide. Old Man's River touches Sections 1, 3 and 4. In Section 4 a bottom of 25 acres of bush land occurs, which contains the only bush land in the township. The south-east quarter of Section 1 is occupied by a settler, who is doing well. This township is admirably adapted for grazing, water and rich grass being abundant. There are some good farming tracts. A lake lies on Sections 24, 25, 13 and 23,

covering about 1,000 acres, which, at the time of survey (September) was almost dry; but in ordinary years contains 8 or 10 feet of water, and old residents have never known it to have been dry before.—*J. F. Snow*, 1883.

- 10. Outlines.**—West, in Section 6, the line leaves the Porcupine Hills; from here north it runs through some small ridges, and across a large hay marsh and several small creeks. East, undulating prairie; the soil is a good clay loam, well adapted to farming purposes. In Section 1 the line crosses Willow Creek, in a valley about 100 feet below the prairie level. This creek appeared to course along this boundary about half a mile or more to the west.—*C. E. Wolff*, 1882-83.

Sub-division—The westerly half is rolling ridges, with intervening meadows, and is skirted on the west by the Porcupine Hills, which lie about half a mile within the western boundary. The soil in this part is black loam in the meadows and gravel on the ridges. The eastern portion is a high, undulating prairie, with a sandy and clay loam soil on a clay subsoil. Willow Creek meanders through Sections 36, 25, 24, 13, 12 and 1, in a valley half a mile wide and 50 feet deep. It is about 80 feet wide in September, and 1 to 2 feet deep.—Three-fourths of this township is good for farming.—*J. F. Snow*, 1883.

- 11. Outlines.**—Rolling prairie. The soil is a rich sandy loam, with clay subsoil. The township is traversed by Willow Creek, which is a clear stream, rising in the Rocky Mountains, and in this region averages about 100 feet in width. On account of the luxuriant growth of grass, the land is very well suited to grazing purposes, and would be well adapted to agriculture, but it is said to be subject to summer frosts.—*T. R. Hewson*, 1883.

Sub-division.—Rolling and undulating, except Sections 6 and 7, which are hilly, caused by the proximity of the Porcupine Hills. Willow Creek enters on Section 32 and flows south-easterly to Section 1. In September the water was still 18 inches deep. Soil, a clay loam, 5 to 15 inches deep, on a clay subsoil, and mostly class 2, the balance being class 1. The creek is fringed with small willows.—*John Francis*, 1883.

- 12. Outlines.**—North, rolling prairie. Soil, sandy loam. A trail crosses 31. No surface water.—*M. Aldous*, 1882.

Consists of high-rolling prairie. The soil is a good sandy loam, averaging about 18 inches in depth, with clay subsoil. On account of the luxuriant growth of grass, the land is well adapted to grazing, and but for the frequent summer frosts which are reported, would be well suited for agriculture. On the west side of the township, in the southern part of Section 7, Trout Creek, and in 18, Willow Creek, with hills on both sides, were crossed.—*T. R. Hewson*, 1883.

Sub-division.—Lies at the eastern foot of the Porcupine Hills, and in the valley of Willow Creek, and is undulating prairie, slightly inclined south-west. The soil is a rich sandy loam, 6 to 12 inches deep, on a clay subsoil, and has a thick growth of grass. The south-west corner is well watered by Willow Creek, a moun-

tain stream, cold, clear and blue, and fringed with willows. Trout Creek joins the former in Section 6, and for two or three miles around here the country is level and low, and in winter snow rarely ever remains. Soil classes 1 and 2; good for farming, and second to none for grazing.—*John Francis*, 1883.

- 13. Outlines.**—In the vicinity of the east and west boundaries the surface is a very dry rolling prairie. Soil, light and sandy; grass poor, no timber.—*F. W. Armstrong*, 1882.

Sub-division.—Rolling prairie and fair average land. Soil, gravelly and stony on the tops of the rolls, but good black clay loam, 5 to 12 inches deep, on a clay subsoil, in the intervening hollows. Section 25 contains a pond of water holding a whitish clay (perhaps marl) in solution, but otherwise good and sweet to the taste. No wood.—*John Francis*, 1883.

- 14. Outlines.**—Very dry, rolling land, having a sandy loam soil. A ravine, traversed by a creek flowing east, was crossed in northern half of Section 1, being the only water observed.—*F. W. Armstrong*, 1883.

Sub-division.—Rolling prairie. Soils, black earthy and sandy loams, 2 to 10 inches deep, on a gravelly clay subsoil, and mostly class 1. Stony and gravelly on the tops of the rolls or ridges. No surface water. No wood.—*John Francis*, 1883.

- 15. Outlines.**—Dry, rolling, open prairie. The soil is sandy; the grass fair. The northern portion of the township is crossed by Mosquito Creek, having prominent banks and little water.—*F. W. Armstrong*, 1883.

Sub-division.—Rolling prairie. Soil, a gravelly clay. Classes 2 and 3. Mosquito Creek flows across the north and north-west, and is a beautiful little stream, having clear water and numerous rapids. In July it averages 40 links wide and 1 foot deep. The banks are steep and sharp to the stream bed, and about 100 feet high. Sandstone rock shows are frequent where the steepest parts occur. No wood.—*John Francis*, 1883.

- 16. Outlines.**—North, unbroken, rolling prairie, with a gravelly soil.—*M. Aldous*, 1881.

Westwards, it is well watered by Mosquito Creek. Along both east and west boundaries the grass is fair. Soil, sandy loam. No timber.—*F. W. Armstrong*, 1883.

Sub-division.—Rolling and undulating prairie. Soil, a black clay loam, 6 to 10 inches deep, on a clay subsoil. Class 1. A few small but good hay marshes occur in the east. No surface water, except in Section 6, which is crossed by Mosquito Creek. No wood.—*John Francis*, 1883.

- 17. Outlines.**—West, rolling and undulating prairie. The soil is a light clay loam, with clay subsoil. There are a few shallow ponds. East, rolling and level. The soil is a good sandy loam, with clay subsoil. A few shallow ponds along the line. In Section 13 Little Bow River was crossed, running south-east, in a valley about 75 feet deep, and very rapid current; water, 1 foot deep.—*C. E. Wolff*, 1883.

Sub-division.—Rolling prairie, generally. Soil, clay loam, class 2, but very poor in appearance. Little Bow River crosses the township, and contains abundance of water; but beyond the river surface water is scarce. The water in the river is good and, in August, was running about 12 inches deep, and with a slow current.—*G. P. Roy, 1883.*

- 18. Outlines.**—West, rolling and undulating prairie. The soil is a light clay loam, with clay subsoil. There are a few shallow ponds. In Section 24 is a large lake, which extends north across the boundary line. In Section 31 Little Bow River was crossed, running south-east, in a valley about 100 feet deep. The water is about 1 foot deep, with rapid current. East, rolling and level. The soil is a sandy loam, with clay subsoil. Some ponds.—*C. E. Wolff, 1883.*

Sub-division.—Rolling prairie, with an inclination to hilliness in the southern part of the township. A fresh water lake of considerable dimensions lies on the north-west corner, and contains the only surface water—except in a few sloughs—in the township. Most of the land is class 2, and poor in appearance, and produces a scant vegetation, probably owing to the dry season.—*G. P. Roy, 1883.*

- 19. Outlines.**—West, undulating and level prairie. The soil is a clay loam, with clay subsoil. In the southern part there is a large lake. In the east the soil is a good sandy loam, with a clay subsoil.—*C. E. Wolff, 1883.*

Sub-division.—Rolling very slightly, with a sandy loam soil—class 2—and better for farming than most of the surrounding townships. The grass was rich, and all kinds of crops might be raised. Water was scarce at the time of survey, in August, except in the south-western part, where there is a lake.—*G. P. Roy, 1883.*

- 20. Outlines.**—North, the land is excellent, and has been ranked as first class. The soil resembles the black loam in the Province of Manitoba.—*T. Drummond, 1882.*

In the west, undulating and level prairie. The soil is a clay loam, with clay subsoil. In the east it is a good sandy loam, with a clay subsoil. There are numerous small ponds or hay marshes scattered over this township.—*C. E. Wolff, 1883.*

Sub-division.—Rolling prairie, rather heavy in the northern part. Water was found in a few marshes, but was rather scarce (August). The soil is generally clay loam, class 2, which ought to be class 1, but for the scantiness of the grass in many places.—*G. P. Roy, 1883.*

- 21. Outlines.**—The land is all first class, with a rich black clay loam soil. Undulating prairie, except where broken by the Bow River, in the valley of which there is a good supply of cottonwood timber, with very fair spruce on the escarpment of the southern banks. The water in the Bow River is clear as crystal. The river flats are covered with a rich growth of grass.—*C. F. Miles, 1882.*

Sub-division.—Good rolling prairie, chiefly adapted for grazing purposes, with a fair percentage of farming lands, containing

some good pasturages and hay meadows. Soil, composed principally of light sandy loam, of an average depth of 6 inches; clay subsoil, gravelly and stony in places. Well watered, and suitable for mixed farming. No timber, except on the Bow River. On the north bank is some 6 to 8-inch cottonwood—Section 30. South bank, a little spruce, on slopes, in Sections 19, 20, 21 and 23. Along the water's edge, in 20, is good cottonwood; also in 21 and 22, where it is from 4 to 12 inches in diameter. South of the river, in Sections 23 and 24, it ranges from 4 to 11 inches. Coal was seen in Sections 20 and 30, on the right bank of the Bow.—*J. J. Francis, 1883.*

- 22. Outlines.**—The land is all first class, with a rich black clay loam soil, and undulating prairie.—*C. F. Miles, 1882.*

Sub-division—Gently-rolling and undulating. Soil, mostly a black loam, broken by intervening stretches of sandy loam, and rated classes 1 and 2. Small marshes are abundant (August), especially in the eastern half and northern tier of sections, which form good grazing and pasture lands. No wood.—*J. J. Francis, 1883.*

- 23. Outlines.**—High-rolling prairie. The soil is black loam, with a sandy loam subsoil. There are very few ponds or marshes. The C. P. R. passes through the central portion of this township from Sections 19 to 24. In the north-eastern portion is situated Weed Lake, lying between Sections 26 and 35 on one side, and 25 and 36 on the other. The water in this lake is alkaline, and the banks low and marshy. The Calgary and Medicine Hat trail crosses the township.—*T. R. Hewson, 1883.*

Sub-division.—Soil, clay loam, 8 inches deep, on a clay subsoil. Class 2, except in the eastern tier of sections, which contain a great deal of low, wet land. The greater portion of Weed Lake is situated in the township. The C. P. R. crosses near the centre, as also does the Calgary and Medicine Hat trail. Langdon Station (C. P. R.) is situated here.—*R. McPhillips, 1883.*

- 24. Outlines.**—North, surface rolling. Soil, poor clayey loam, 10 to 15 inches deep; subsoil, hardened clay. Very light grass.—*W. Ogilvie, 1882.*

The surface is high-rolling prairie; the soil black loam, with sandy loam subsoil. There are very few ponds or marshes.—*T. R. Hewson, 1883.*

Sub-division.—Rolling prairie. Soil, clay loam, 8 inches deep, on a clay subsoil, and class 2. There are a few hay swamps near Weed Lake, and in Sections 1 and 2, low alkali flats where the land is class 3.—*R. C. McPhillips, 1883.*

- 25. Outlines.**—Rolling country. The soil is of a moderately good character. Water very scarce. In the northern portion there is a creek which is partially dry.—*T. R. Hewson, 1883.*

South, rolling prairie. Soil, poor clayey loam. Very light grass.—*W. Ogilvie, 1882.*

Sub-division.—Soil, class 2, but in many instances class 1. The sloughs are not very numerous, but are large where found. The surface of the township is slightly-rolling.—*G. P. Roy, 1884.*

- 26. Outlines.**—Rolling country. Hills were crossed in Section 7 East, 6, a small slough on line between Sections 12 and 13, but surface water scarce. No wood.—*T. R. Hewson*, 1883.

Sub-division.—Rolling prairie. Water is rather scarce, except in a few sloughs which would dry up in a dry season. The soil is mostly class 2, being a sandy loam, and where there is no gravel it is a very good class 2; but the gravel surface is very extensive, and, with want of water, makes the township a poor one for settlement.—*G. P. Roy*, 1883.

- 27. Outlines.**—Rolling prairie. Soil, first class. There is a small creek in this township, flowing south-east. Well adapted to agriculture.—*T. R. Hewson*, 1883.

Sub-division.—Undulating prairie. A deep ravine—containing a spring creek—meanders through it in a south-easterly direction from the north-west corner. There are some smaller ravines in different parts of the township. The soil is a black loam, with a clay subsoil, and class 1.—*L. Gosselin*, 1884.

- 28. Outlines.**—Northward, mostly an undulating prairie surface. Soil, clay loam and black loam. Class 1. Good marsh water and rich pasturage in places. A good township for settlement.—*T. Fawcett*, 1883.

Rolling prairie, with hills on the western line in Sections 6, 18, 30 and 31. Water courses in Sections 6 and 31, and in the southern half of Section 12 a creek crosses the east line three times. Wood and water are scarce.—*T. R. Hewson*, 1883.

South, undulating prairie. In Sections 3, 4 and 6 hills were crossed; also a creek, having a south-easterly course, in Section 6. No wood.—*L. Gosselin*, 1884.

- 29-30. Outlines.**—Rolling prairie. Soil, first class.—*L. R. Ord*, 1884.

- 31. Outlines.**—Rolling prairie, drained by a small creek flowing south-east. Some marshy ponds discharge into the latter. Soil, second class.—*L. R. Ord*, 1884.

- 32. Outlines.**—North, gently-rolling prairie, with a rich soil, covered with bush in the western half. A creek, running through a valley about 15 chains wide, in Section 33, and a ravine in 35, were intersected.—*E. Bray*, 1883.

Rolling prairie, with a few small lakes, generally brackish. Soil, shallow and dry in places, but would average second class.—*L. R. Ord*, 1884.

- 33. Outlines.**—Rolling prairie, with some brush and bluffs of small poplar in the western part. A coulée, about 50 feet deep, crosses the township from Section 31 to Section 3, containing a small dry creek. Soil, fair sandy loam, averaging second class.—*L. R. Ord*, 1884.

- 34. Outlines.**—Rolling prairie, with a few bluffs of poplar and some brush. A small lake lies in Section 21, and the creek draining it joins a larger stream in Section 12, which flows through the easterly sections to the southward. The soil is a black sandy loam, ranking first class over all the township, except in a few alkaline patches along the last stream.—*L. R. Ord*, 1884.

35. Outlines.—The south half of this township is heavily timbered with poplar of fair size. The remainder is undulating country, with scattered clumps of poplar and willow. The soil, generally, is first class, with occasional patches of second and third class land along the eastern boundary.—*T. Kains, 1883.*

36. Outlines.—North and east, rough, hilly country, with poplar and willow bluffs throughout the greater part. Towards the west boundary the country becomes more open, with a first class soil. Going south on the west boundary there is an undulating country with scattered clumps of poplar and willow. Soil, generally, is first class.—*T. Kains, 1883.*

Sub-division.—The north-east and south-west corners are covered with poplar and thick willows. The remainder of the township is alternate prairie, with clumps of poplar and willows. The soil is class 1, except the eastern part, which is traversed by a range of hills from 75 to 150 feet high, and in the vicinity of Shoal Lake, where the land is low and alkaline. The township is well watered and drained by fresh-water creeks, and is well suited for agriculture.—*M. J. Charbonneau, 1884.*

37. Outlines.—This township is comparatively open, undulating country, with scattered clumps of poplar and willow. The soil is generally first class, with occasional patches of second and third class land.—*T. Kains, 1883.*

Sub-division.—The south part of this township is covered with groves of small poplar and thick underbrush. The north part is watered by numerous marshes and creeks of fresh water. Scattered spruce occur in the north-west corner, along the banks of a creek. The soil rates classes 1 and 2, and the township, although suitable in many parts for farming, is well adapted, generally, for grazing.—*M. J. Charbonneau, 1884.*

38. Outlines.—West, undulating country, with scattered clumps of poplar and willow. The Red Deer River crosses the line in Section 18. North of the river this township is heavily timbered with poplar. The Bow River trail crosses the line at the post between Sections 19 and 30. The soil, generally, is first class. Some fine spruce was found close to the river. The south-east quarter is comparatively open, undulating country, with scattered clumps of poplar and willow. The north-east is heavily timbered with poplar, from 4 to 10 inches in diameter. The soil is generally first class, with occasional patches of second and third class land.—*T. Kains, 1883.*

Sub-division.—The north-west part is very hilly and covered with poplar suitable for fencing. The Red Deer River crosses the township from Section 18 north-east to 34, and to the south-east of it the country is mostly open prairie, alternating with willow brush, scrub and scattered clumps of poplar. Along the river there is considerable quantities of spruce, well adapted for building purposes. The township is well watered by creeks and fresh-water marshes, and the soil is a rich black loam, 6 to 12 inches, and fine for agricultural purposes.—*M. J. Charbonneau, 1884.*

39. Sub-division.—North part. The part of this township, north of the Blind Man's River, is gently undulating, and sloping gradually to the river. The Calgary trail to Edmonton crosses Sections 15, 22, 26 and 25. The soil is generally first class and well suited for agriculture. The water in the lake is fresh and good. Poplars, 4 to 10 inches in diameter, are growing in bluffs, especially near the river and lakes. South part. The south is nearly all covered with poplar and spruce. This township is better suited for stock-raising than farming, as the banks and margins of the Red Deer and Blind Man's Rivers and lakes furnish rich grass. The soil, generally, is a sandy loam, having, in patches, a growth of scrub and bluffs of poplar bush, 2 to 10 inches. There are some excellent pieces of farming land.—*M. J. Charbonneau*, 1884.

40. Outlines.—North, the line passes through a well timbered section of country. Poplar and cottonwood, from 4 to 8 inches in diameter, and belts of spruce, from 8 to 20 inches in diameter and 60 feet high. Low ridges were crossed. The general appearance is undulating. Soil, first class. On the west the surface is level. There are a few prairie openings in the first two sections going south, and the remaining four are covered with a dense growth of poplar. Soil, first class.—*C. A. Magrath*, 1882.

Sub-division.—Rolling and hilly prairie. Soil, a rich black loam, and class 1. On Sections 2, 3, 10, 11, 14 and 15 lies a beautiful fresh-water lake, surrounded by high banks, which are thickly wooded on the west. The water in the other lakes is also good and fresh. The Calgary and Edmonton trail crosses the township. Well adapted for grazing, and good isolated areas suitable for farming. East, a lake, 14 chains wide, crosses Section 36, and the Calgary trail in Section 24. In the north-east there is a considerable quantity of poplar trees, 2 to 14 inches in diameter; but southward from this the country is more open, and alternates between open and brushy prairie.—*M. J. Charbonneau*, 1884.

41. Outlines.—The easterly quarter is more or less burnt over, and is now covered, in many places, by willow and willow scrub. The westerly three-quarters is covered with a more or less dense poplar bush, up to 12 inches in diameter, interspersed with numerous beaver meadows and ponds. These latter could, without much difficulty, be brought under cultivation, by removal of the old beaver dams. Some belts of spruce are growing, sufficient for domestic purposes. Soil, black sandy loam. A creek, a tributary of Wolf Creek, runs north-easterly through the south-east corner.—*C. F. Miles*, 1884.

South, undulating surface. Soil, first class. Well timbered with poplar.—*C. A. Magrath*, 1882.

42. Outlines.—The south-east quarter is covered principally with willow scrub and second-growth poplar bluffs. The north-east quarter is covered with poplar of larger dimensions, partly fire-killed, interspersed with beaver meadows and some belts of small spruce. The remainder is more or less densely wooded with poplar and balm of Gilead, and some spruce up to 12 inches in

diameter. A creek, which rises in the adjoining township west, and leaves it in Section 36 (running north-easterly), enters this township on the north boundary, and running south-westerly, emptying into Wolf Creek, and leaves again in Section 9. The flats extending on each side for several chains still contained the frost, less than 1 foot from the surface, on the 3rd June. Soil, principally black sandy loam, and may be rated first class.—*C. F. Miles*, 1884.

43. *Outlines*.—Rolling country, somewhat hilly in the west, but flat towards the eastern section, and wooded with poplar, the timber being, as a rule, small and of little value.—*L. R. Ord*, 1883.

Sub-division.—Rolling and broken, with numerous small marshes. A small stream drains the west half of the township, and unites in the north-west quarter of Section 31 with another stream to form Beaver Creek, which flows easterly across Sections 31 and 32. The valley of the first named stream is mostly marsh, and covers the greater part of Sections 5, 6 and 8, and about half of 7, after which the valley is much narrower, not exceeding over half a mile wide. The meridian line, from the north-east angle of Section 23 southwards, passes through a network of marshes, which, in Sections 13, 14, 23 and 24, deepen into a lake of over 380 acres. Battle River flows south-easterly through Sections 34, 35, 36 and 25, in a valley about 80 feet deep. The banks are about 10 feet high, and at high water the stream is very tortuous, uniformly about 58 feet wide, and with a two-mile current, and a depth of 4 to 5 feet; broken by occasional shallow spots or ledges of rock. The bottom is a bed of rock, overlain, more or less, with sand. The central third of the township is well timbered with poplar of fair size, and occasional clumps of spruce. North of this wooded belt, except in Sections 35, 36, 25, 26 and the south parts of Section 27 and 28, which have more or less timber, the country is prairie, with patches of *brulé* and scrub. South of the central wooded belt the timber is broken by prairie openings. Spruce is more abundant, particularly in Section 1, 2, 11 and 12. The soil is a black loam on clay loam subsoil, in the north, ranking class 2, but getting lighter southwards, where, in places, it only ranks class 3.—*J. A. Kirk*, 1884.

44. *Outlines*.—North, the Battle River crosses in Section 31, in a south-easterly direction, heavily fringed with willows. Along the slopes of the valley numerous clumps of spruce are scattered. Undulating country, thickly timbered with small poplar, from 2 to 8 inches in diameter, and dotted with clumps of spruce. Numerous muskegs.—*T. Kains*, 1882.

Battle River crosses from Section 31 to Section 2, in a broad, shallow valley, generally marshy at the bottom. A strip of prairie, about a mile wide, runs along the valley. The remainder of the township is gently-rolling, and wooded south-west of the stream with poplar and a few spruce; while the northern half is a tract covered with small poplar and occasional spruce, and where not dotted with muskegs is totally unfit for cultivation, as it is shallow and gravelly. Third and fourth class.—*L. R. Ord*, 1883.

Sub-division.—The land is rolling, and in the north and east very marshy. Battle River enters the township in Section 31, and flowing south-easterly through a valley about 80 feet deep, crosses the south outline near the south-east angle of Section 3. The cut banks of the river are about 10 feet high, and confine the stream at its highest water to a tortuous channel, remarkable for its uniform width of 58 feet. The current is sluggish—about two miles an hour—and the depth at high water about 4 to 5 feet, with occasional shallow spots, formed by ledges of rock, the bottom being rock, overlaid, more or less, with sand. The land to the north-east is well wooded with poplar of small size, but along the river there is a strip of prairie, with patches of brulé. Marshes of large extent—the work, in many instances, of beaver—are numerous, and make large areas useless. Low, gravelly ridges run through the east part of the township. To the south-west of the river fire has destroyed much of the timber; but there are still a few belts of poplar and clumps of spruce. The land is dryer than on the other side of the river. The valley is generally prairie, with some scrub, which, in Sections 30 and 31, is thick, intermingled with fine clumps of spruce. The soil is gravelly, and class 2, especially in the east, which is interspersed with gravel ridges and marsh, and practically useless for agricultural purposes.—*J. A. Kirk, 1884.*

52. *Sub-division.*—The land along the trail from Edmonton to Whitefish Lake, in the north-eastern part of the township, is of good quality. The southern portion is much broken by small ponds and marshes. There is some large spruce in the south-west, but not sufficient for lumbering purposes.—*W. Beatty, 1882.*

53. *Sub-division.*—Much of it is tamarac and spruce swamp; timber very thick, but of poor quality. Soil, in the swamps, is coarse sand; that of the upland is of fair quality. Alluvial deposit, from 6 to 10 inches in depth, with clay loam subsoil. The Indian Reserve occupies Sections 25 to 28 and 33 to 36 and parts of 29 and 32.—*W. Beatty, 1882.*

54. *Sub-division.*—Mostly in the Indian Reserve which occupies all except the westerly tier and half tier of Sections. It is well timbered with spruce and poplar, suitable for building. The country is hilly. Soil, class 2. Water plentiful. The Lake St. Ann trail crosses here. The Sturgeon River crosses to the north.—*G. A. Simpson, 1883.*

55. *Sub-division.*—About one-third—the northern portion—of this township is occupied by Chief Alexander's Reserve. It is heavily timbered with poplar, and towards the south-west part there is some good spruce. The soil rates classes 1 and 2. The surface is rolling. The Sturgeon River enters the south-westerly sections. There are a few lakes, but water is not abundant.—*G. A. Simpson, 1883.*

56. *Sub-division.*—All taken up by the Indian reserve, occupied by chief Alexander, excepting the northerly tier of sections and parts of the tiers of sections along the eastern and western boundaries.

It is heavily timbered with spruce and poplar. The soil is class 2, and there is a plentiful supply of water —*G. A. Simpson*, 1883.

57. Outlines.—West, country timbered with poplar, spruce and tamarac, with burned slash in Sections 7 and 30; 31 is marshy. A small creek crosses in 6.—*W. Ogilvie*, 1882-83.

South, prairie; well wooded; especially in Sections 31, 35 and 36. A creek in 32, and marshes in 33 and 34, were intersected.—*C. A. Magrath*, 1883.

Sub-division.—The northern part is covered with muskegs; the balance is timbered with fir and poplars, and the surface is rolling, with a soil rating class 2.—*G. A. Simpson*, 1883.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XXVIII.

2. *Outlines.*—Is traversed by Belly River from south to west. The land on the west side of it is light and broken and, in places, stony. On the east the soil is better, being more of a clayey character, but rough and broken. Some timber on river bottom.—*F. W. Armstrong, 1883.*
3. *Outlines.*—This township is bounded on the east by the Waterton River, and is cut by the Belly in the south-east corner. The land slopes each way to the rivers. The grass is good. No timber or water, except in the river bottoms.—*F. W. Armstrong, 1883.*
4. *Outlines.*—Is hilly and broken, west of the Waterton River, which flows through it from south to north. East of it the land is broken by long and deep coulées, running back from the river. No timber, except poplar and cottonwood in river bottoms.—*F. W. Armstrong, 1883.*
5. *Outlines.*—Is well watered by Foothill Creek, its many tributaries, and the Waterton River. Along the latter there is some poplar and cottonwood. The grass is good.—*F. W. Armstrong, 1883.*
6. *Outlines.*—Is open prairie; rather inclined to be dry in summer. The grass is good. The northern half is in the Peigan Reserve. The east is inclined to be high and hilly. No wood.—*F. W. Armstrong, 1883.*
9. *Outlines.*—The west and east lines run through the Porcupine Hills. The country is very rough, and greatly cut up with deep coulées. The soil in the valleys is generally composed of a black sandy loam, with clay and gravel subsoil, but the hills are invariably sandstone and gravel.—*C. E. Wolff, 1883.*

Sub-division.—Mostly hilly prairie. Lies at the south base of the Porcupine Hills, and has a black loam soil, of 4 to 12 inches deep, on a stony clay subsoil. Classes 2 and 1. Numerous springs abound, issuing from the sides of the elevations. The township is generally too hilly for farming, except in those sections in the valley of Olson's Creek, viz., 2, 3, 4, 9, 10, 11, 14, 15, 16 and 23, and is altogether unequalled as a grazing country. No wood.—*John Francis, 1883.*
10. *Outlines.*—West, very rough and hilly, cut up with deep coulées. The soil in the valleys is generally composed of a black sandy loam, with clay and gravel subsoil, but the hills are invariably full of sandstone and gravel. Over to the east, in Section 1, the line leaves the Porcupine Hills, and from here north it runs through some small ridges and across a large hay marsh; also, several small creeks flowing east.—*C. E. Wolff, 1882-83.*

Sub-division.—In the Porcupine Hills, and mostly too rough and uneven for farming, except a few slopes or patches along the hill sides and hollows, where the alluvial deposits have been washed down from the hills. The soil is a black loam, 3 to 8 inches deep, on a gravelly subsoil. Several spring creeks and springs occur, and together with the luxuriant crop of grass everywhere prevalent, renders this township an excellent one for grazing. No wood.—*John Francis, 1883.*

11. *Outlines.*—West, is both broken and hilly. The south Fork of Willow Creek runs through the northern portion. The grass is good. There is some timber along the south Fork.—*F. W. Armstrong, 1882.*

East, rolling prairie. The soil is a good sandy loam, with clay subsoil. Very suitable for grazing, and, but for the frequent summer frosts, well adapted to agriculture, the growth of grass being luxuriant.—*T. R. Hewson, 1883.*

Sub-division.—On the eastern slope of the Porcupine Hills the southern and western tiers of sections are hilly, and the remainder heavily-rolling, except the bottom lands of the small valleys of Trout and Muddy Pond Creeks, which are level. Sections 31, 32, 33 and 34 are crossed by Trout Creek, a fine stream of cold, clear water, 40 to 50 links wide, and 10 inches deep (October). Muddy Pond Creek originates near the southeast corner, and is a small brook having plenty of water here, but drying up further eastwards. The soil is a black and sandy loam, 4 to 8 inches deep, on a stony clay subsoil. More suitable for grazing than farming, although those sections near the creeks have some very fine land, particularly Sections 17, 23, 26 and 27.—*John Francis, 1883.*

12. *Outlines.*—North, unbroken, rolling prairie, with a sandy soil. A cart trail crosses the line in Section 31. Surface water and wood scarce.—*M. Aldous, 1881.*

West is broken and hilly. No timber. The south fork of Willow Creek and another creek flowing into it, run through this township, both being fed by the numerous springs everywhere visible. The grass is good and long. It is a good ranche.—*F. W. Armstrong, 1882.*

East, is well adapted to grazing purposes, the growth of grass being luxuriant. The surface is rolling prairie, and the soil a rich sandy loam, with clay subsoil. The land is very suitable for agriculture, but is reported to be subject to frequent summer frosts. Is traversed by Willow and Trout Creeks, the latter flowing into the former on Section 12.—*T. R. Hewson, 1883.*

Sub-division.—The west side lies in the Porcupine Hills, and the east side contains Willow and Trout Creeks. Sections 1, 2, 11, 12, 13, 14, 23, 24, 25, 26 and 36 comprise all the land fit for farming; the remainder is excellent for grazing. The soil of the bottom lands is a rich, sandy loam, 8 to 10 inches deep, on a clay subsoil; the remainder of the township is gravelly. Willow Creek is fringed with willow in places, and Trout Creek in Sections 3 and 11, is more heavily bordered with cherry and willow.—*John Francis, 1883.*

- 13. Outlines.**—Along the west boundary the country is hilly. In the valleys, some of which are one mile wide, the vegetation is luxuriant. Soil, rich black loam.—*C. A. Magrath*, 1882.

East of Willow Creek the soil is light and sandy. West of it it is gravelly. The Calgary and McLeod trail runs through this township. There are some poplar and willows along the creek. The grass is very poor. No timber.—*F. W. Armstrong*, 1882.

Sub-division.—Willow Creek crosses in a wide ravine, 80 feet under prairie level. The Pine Coulée—described in 14 and 15—enters this ravine in Section 27. The Porcupine Hills cover the two western tiers of sections, and through them runs a ravine which, in Section 7, has a depth of 1,000 feet. On the banks of Willow Creek there is a thick belt of scrub, with a few scattered cotton trees, averaging about 8 inches in diameter. The soil is generally clay, having the surface plentifully strewn with stones, and owing to this fact is not to be recommended for the farmer; but it cannot be surpassed for grazing. The valley of Willow Creek—where not stony—is very suitable for irrigating purposes.—*J. A. Kirk*, 1883.

- 14. Outlines**—West, the country is hilly; but in the valleys, some of which are one mile wide, the vegetation is luxuriant. Soil, rich black loam.—*C. A. Magrath*, 1882.

East, is a dry, rolling prairie, with an occasional pond or slough. The grass is poor. No timber, except in a pine coulée, and there in only small quantity.—*F. W. Armstrong*, 1882.

Sub-division.—The two westerly tiers of sections are hilly; the rest is rolling prairie. Pine Coulée, a well known ravine, running almost due north and south for some twelve miles, crosses the centre. The soil on the hills is a black loam on a clay subsoil, but the summits are frequently gravelly. On the rolling land a clay lies which is difficult to break, but which is easily pulverized after it is broken.—*J. A. Kirk*, 1883.

- 15. Outlines.**—West, is excellent undulating prairie, with deep black loam. Towards the west-centre are the Porcupine Hills. These hills are, here, of very good soil, with long grass; and, in places, outcrops of horizontal layers of a coarse and somewhat soft sandstone, fit for building purposes, appear. The first prominent hill crossed was found by measurement to rise 1,000 feet above its valley. One pit on top of this hill was dug 3 feet deep, into solid black loam. This is generally the case on these hills. To the south-west woods of pine could be seen.—*O. J. Klotz*, 1882.

Along the east boundary it is dry, rolling, open prairie. Soil, sandy; the grass is fair.—*F. W. Armstrong*, 1882.

Sub-division.—Open prairie. The Porcupine Hills occupy a small strip of the west side. Cutting through them is the Pine Coulée, 500 feet deep, with almost perpendicular rock sides. This coulée is a favorite refuge for cattle in stormy weather. There are a few pine trees on the west bank of the coulée. The soil is various—mostly a black loam, then clay, sandy loam and gravelly clay—and is well suited for agricultural purposes.—*J. A. Kirk*, 1883.

- 16. Outlines.**—North, rolling prairie, with a gravelly soil. Trail to McLeod in 31, and a marsh, about 10 chains wide, in 32, were intersected. Surface water and wood scarce.—*M. Aldous*, 1881.

The north is good, dry and undulating prairie. Trail from Fort McLeod to Calgary crossed in Section 31. West, is excellent undulating prairie, with deep black loam. Mosquito Creek is in the northern part, and was (13th September) only a succession of pools of good water.—*O. J. Klotz*, 1882.

The eastern half is a rolling prairie. Soil, sandy loam, and grass good.—*F. W. Armstrong*, 1882.

Sub-division.—Is a rolling prairie, through which the Mosquito Creek, and one of its branches, passes, affording to several sections opportunities for irrigation. The soil is a black loam overlying a good clay subsoil—class 1—and well suited for farming.—*J. A. Kirk*, 1883.

- 17. Outlines.**—West, good undulating prairie of black loam; grass heavy and matted. Trail from Fort McLeod to Calgary crosses Sections 6, 7 and 18 —*O. J. Klotz*, 1882.

East, rolling and undulating prairie. The soil is a light clay loam, with clay subsoil. There are a few shallow ponds. The Bow River crosses Section 36.—*C. E. Wolff*, 1883.

Sub-division.—Rolling prairie, traversed by several ravines. The Little Bow River crosses Section 36. Soil, a black loam, 5 to 8 inches deep, on a friable clay subsoil, and class 1. The grass is short and wiry, forming excellent pasturage, and the soil should yield fine crops, if the climatic conditions are favorable—*J. A. Kirk*, 1883.

- 18. Outlines** —West, undulating prairie of good black loam, with a good growth of grass.—*O. J. Klotz*, 1882.

East, rolling and undulating prairie. The soil is a light clay loam, with clay subsoil. There are a few shallow ponds. In Section 24 a large lake extends north across the Correction Line. In Section 1 Little Bow River was crossed, running south-east, in a valley about 100 feet deep. The water is about 1 foot deep, with rapid current.—*C. E. Wolff*, 1883.

Sub-division.—Rolling prairie. Soil, a black loam, averaging 6 to 7 inches deep, on a subsoil of friable clay, and class 1. In several places a considerable percentage of sand occurs, especially in the vicinity of the lake, which, in part, occupies the north-easterly sections of the township. This lake—which is slightly alkaline—is the breeding place of numerous water fowls, and its margin is surrounded by large hay meadows. Owing to the scanty rainfall, ponds and hay marshes are few in number, and the settlers on High River, in the next township west, rely entirely on this meadow for their supply of wild hay. The grass on the higher lands is short and wiry, and affords excellent pasturage all the year round. Badger holes are numerous in the township, and on the soil which they have excavated around their holes there grows a blue grass, conspicuous by its color and length from the ordinary prairie grass, which leads to the inference that a changed or an improved quality may be obtained

by tillage. The Little Bow River meanders in a south-easterly direction across the southern sections, in a valley some 80 feet below prairie level. It is a fresh stream, about 10 feet wide and 1 foot deep (June-July), running with a sluggish current over a stony bed. In the banks of the ravine there are exposures of arenaceous shale. This township is undoubtedly a magnificent grazing country, and if the climatic conditions are favorable, it is a very desirable agricultural country.—*J. A. Kirk*, 1883.

- 19. Outlines**—West and east, undulating and level prairie. The soil is a rich clay loam. The grass is, in every case, rich and plentiful. In Section 19 Tongue Creek was crossed, about 25 links wide and 1 foot deep, with sluggish current. In Section 6 High River was crossed, running east, where the line crosses, but it turns north shortly after crossing. The valley is heavily wooded with large cottonwood, poplar and willow. The river is about $1\frac{1}{2}$ chains wide, 4 feet deep, and has a very rapid current.—*C. E. Wolff*, 1883.

Sub-division.—High River and part of Tongue Creek traverses the westerly portion of the township. The water is good in these streams, and the High River is 3 to 4 feet deep (September), with a four mile current. The soil along the streams is a sandy loam, and throughout the remainder of the township is a clay loam on a clay subsoil. The prairie grass is short, but suitable for grazing.—*R. C. McPhillips*, 1883.

- 20. Outlines**.—North, the land is excellent, and has been ranked as first class. The soil resembles the black loam in the Province of Manitoba. In Section 32 High River is crossed by the line, just about a mile north of its junction with Sheep Creek, which flows from the west.—*T. Drummond*, 1882.

West, undulating prairie. The northern portion is covered with small willow and young poplar. The soil is rich black sandy loam, with good clay subsoil, and is excellent farming or grazing land. In Section 19 Sheep Creek was crossed, in a valley about 75 feet deep and about one mile in width. Sheep Creek is about 3 chains wide and 3 feet deep. The valley is well wooded with cottonwood and poplar. Passing over to the east the surface is undulating and level. The soil is a clay loam, with clay subsoil. The country through this township is very wet, many miles being flooded with the melted snow of the preceding winter.—*C. E. Wolff*, 1883.

Sub-division.—Rolling prairie. High River and Sheep Creek run through the township. The soil is a clay loam, of 10 inches, on a clay subsoil, except in the valleys, where it is a sandy loam, on a clay subsoil also, and class 2, generally.—*R. C. McPhillips*, 1883.

- 21. Outlines**.—West, rolling country, broken by small marshes in Sections 7 and 30. Surface water and wood scarce. Hills were seen in 7 and 18, and a small slough intersected in 6.—*T. R. Hewson*, 1883.

The land is all first class, with a rich black clay loam soil. Undulating prairie, except where broken by the Bow River, in

the valley of which there is a good supply of cottonwood timber, with very fair spruce on the escarpment of the southern banks. The water in the Bow River is clear as crystal. The river flats are covered with a rich growth of grass.—*C. F. Miles*, 1882.

Sub-division.—Soil, a clay loam, 10 inches, on a clay subsoil. Class 2. The Bow River crosses diagonally the north-east quarter, and the High River courses from Section 5 across the township and joins the Bow River in Section 26. These rivers have a breadth of 5 or 6 chains, a depth of 3 to 4 feet, and a current of three to four miles (July). In Sections 22, 23, 26 and 27 lies the Indian Industrial School Reserve. The land in the Bow valley is a sandy loam. There are a few scattered hay swamps and one lake in the township.—*R. C. McPhillips*, 1883.

- 22.** *Outlines.*—West, rolling prairie. Bow River, flowing through a valley about 40 chains wide, is intersected in Section 7, the line crossing a small island. A small slough in 6. No wood.—*T. R. Hewson*, 1883.

East, rolling prairie, the soil being a rich black clay loam.—*C. F. Miles*, 1882.

Sub-division.—Rolling prairie. Soil, a clay loam, 8 or 10 inches, on a clay subsoil, except in the valley of the Bow River, where it is a sandy loam on a clay subsoil. A few hay swamps occur. The grass, though short, seems well suited for grazing. The Bow River crosses the south-east quarter.—*R. C. McPhillips*, 1883.

- 23.** *Outlines.*—West, surface rolling and knolly. Soil, a fair black clayey loam, from 12 to 18 inches deep; subsoil, hard clay. Some small meadows.—*W. Ogilvie*, 1882.

The east is high-rolling prairie. Soil, black loam, with sandy loam subsoil. There are very few ponds and marshes. The C.P.R. passes through this township; also the Calgary trail.—*T. R. Hewson*, 1883.

Sub-division.—Rolling prairie. Soil, sandy loam. Classes 1 and 2. Many marshes occur on Sections 7, 8, 17, 21, 22, 34 and 35. Sloughs are plentiful, and large quantities of hay are cut and cured in this township, for use at Calgary and its vicinity. It is a fine township for farming. The C.P.R. crosses.—*G. P. Roy*, 1884.

- 24.** *Outlines.*—North, surface rolling. Soil, clayey loam, 10 to 15 inches deep; subsoil, hardened clay; light grass. West, surface rolling and knolly. Soil, a fair black clayey loam, from 12 to 18 inches deep; subsoil, hard clay. Some small meadows.—*W. Ogilvie*, 1882.

East, surface, rolling prairie. Soil, black loam, with sandy loam subsoil. This township contains very few ponds or marshes along the line, but some west of it.—*T. R. Hewson*, 1883

Sub-division.—Rolling prairie. Soil, a sandy loam. Classes 1 and 2. There is a fair supply of water in the township. A large marsh covers parts of Sections 10 and 11. Hay lands are also to be found, but not in very great areas.—*G. P. Roy*, 1884.

- 25. Outlines.**—West, rolling prairie, with many marshes. Clay soil, class 1, and capital grazing.—*T. Fawcett*, 1883.

East, rolling country. The soil is of second class character, being composed of a thin layer of sandy loam, with a hard clay subsoil. Water very scarce and grass very scant.—*T. R. Hewson*, 1883.

Southwards, rolling prairie. Soil, clay loam, 10 to 15 inches deep; light grass.—*W. Ogilvie*, 1882.

Sub-division.—Rolling prairie, with numerous hay sloughs. The soil is a sandy loam, 3 to 6 inches deep, on a dry sandy subsoil. Class 2.—*C. E. LaRue*, 1883.

- 26. Outlines.**—West, very heavily-rolling land, having numbers of marshes in the depressions, and good grazing. The soil is a clay loam, and class 1.—*T. Fawcett*, 1883.

Rolling country. Soil, of a second class character, being composed of a thin layer of sandy loam, with a hard clay subsoil. Water very scarce, and grass very scant.—*T. R. Hewson*, 1883.

Sub-division.—Rolling, open prairie, interspersed with numerous hay sloughs, and three lakes—all fresh. The soil is sandy loam, from 2 to 6 inches deep, on a sandy subsoil, and somewhat dry.—*C. E. LaRue*, 1883.

- 27. Outlines.**—West, rolling and undulating prairie, with many marshes and scattered willows. Soil, clay loam, class 1, on clay subsoil. Splendid grazing land.—*T. Fawcett*, 1883.

East, rolling prairie. Good clay soil, well adapted to agriculture.—*T. R. Hewson*, 1883.

Sub-division.—Undulating prairie. Many small ravines occur. There is a fresh-water lake in the south-east of Sections 1 and 12. Water is very scarce in the northerly sections. The soil is a black loam on a clay subsoil, and class 1.—*L. Gosselin*, 1884.

- 28. Outlines.**—North and west, rolling prairie. Soil, clay loam—class 1—10 to 20 inches deep. Good land for settlement, and rich pasturage in the neighborhood of the marshes, which are fresh. Bluffs of poplar occur occasionally in the valleys.—*T. Fawcett*, 1883.

Rolling country. Soil, black loam, with clay subsoil. There are numerous small watercourses, which are partially dry. Well adapted to agriculture.—*T. R. Hewson*, 1883.

Sub-division.—Undulating prairie, much broken by ravines, from 20 to 100 feet deep, in several of which are streams of good water, generally running in a south-easterly direction. One ravine in the north-east contains a creek 15 links wide and 2 feet deep of good water. The soil is a black loam on a clay subsoil, and class 1.—*L. Gosselin*, 1884.

- 29. Outlines.**—Rolling prairie, broken by the valley of the Rosebud River and a smaller branch of it, which crosses the township flowing south-east. North-east of the larger valley the soil is rich, and of first class quality, but the remainder of the township is of lower rank, rating second and third class.—*L. R. Ord*, 1884.

- 30.** *Outlines.*—Rolling prairie. Soil, first class—a black sandy loam, 8 to 12 inches deep, with clay loam subsoil.—*L. R. Ord*, 1884.
- 31.** *Outlines.*—Rolling prairie. Soil, shallow and dry, ranking second and third class.—*L. R. Ord*, 1884.
- 32** *Outlines.*—North, rolling prairie, with a rich soil. Some small tributaries of Lone Pine Creek cross the line.—*E. Bray*, 1883.
- Rolling prairie. A small creek crosses the township from north-west to south-east, and a long, narrow, marshy lake lies in the south-east corner. The soil is dry, shallow and gravelly in places, but improves towards the north, averaging second class — *L. R. Ord*, 1884.
- 3** *Outlines.*—Rolling prairie, covered with willow brush, and cut by one or two deep coulées discharging to the southward. Soil, rich and fertile—a black loam, 10 inches deep, with clay loam subsoil. First class.—*L. R. Ord*, 1884.
- 34.** *Outlines.*—Rolling prairie, with willow brush and bluffs of poplar, broken by coulées. Soil, a rich black loam, 10 inches deep, with clay subsoil. First class.—*L. R. Ord*, 1884.
- 35** *Outlines.*—West, prairie, rolling in the north, and level in the south. Comparatively open, with scattered poplar and willow scrub; a few spruce in 31 and 30. A tributary of Red Deer River, running through a narrow valley, crosses in 18, also a water-course running north from a small marsh in 7. Soil, good. Class 1.—*M. Aldous*, 1880.

The south half is heavily timbered with poplar of fair size. The remainder is undulating country, with scattered clumps of poplar and willow. The soil is generally first class.—*T. Kains*, 1883.

NOTE.—From here northwards all the townships of this range adjoin the Fifth Initial Meridian, and are fractional.

- 36.** *Outlines.*—North-eastwards the country is open, with scattered willows. Red Deer River crosses the line, and runs northwards in Section 32. The Bow River trail lies east of the river. The river bed is 60 yards wide, and stony; the water flows with a swift current, in a valley about 100 feet deep, and having fine spruce and poplar. This township is not quite full. Along the east boundary the country is rolling and undulating, with bluffs of poplar and willow on every section, except 36, becoming more plentiful toward the south. A creek of good water flows northward through Sections 24 and 25. The soil consists of a vegetable mould, 12 to 18 inches in depth, on a subsoil of clay, and rates class 1.—*T. Kains*, 1883.

The western part of this township is in the valley of the Red Deer River, and has a low, flat surface, with excellent soil. Class 1. The prairie is partially covered with low scrub and scattered willow. Crossed the Red Deer River in Section 6. The river, at this point, is very deep and rapid, with intervening sand bars.—*M. Aldous*, 1880.

Sub-division.—Covered with groves of small poplar and willows. A few good bluffs of spruce were found along the banks of

the Red Deer River. The west part is broken by the Red Deer River, and is very hilly. The east part is watered by several fresh-water marshes. The soil is generally first class, being a rich black loam, from 10 to 20 inches deep. This township is well adapted for agricultural purposes.—*M. J. Charbonneau, 1884.*

- 37. Outlines.**—West, prairie, heavily timbered with poplar, willow, tamarac, birch and spruce, except Section 6 which, is comparatively open. Soil, excellent in south, but is somewhat swampy in north. Small marshes and Kilickenick Creek, in the south-west.—*M. Aldous, 1880.*

Red Deer River crosses the southern boundary and runs northward from Section 5 to 35, and the Bow River trail lies along the top of its eastern bank. The River bed is 4 chains wide, and stony, and the water swift. Along the river banks fine spruce and poplar grow. The surface is generally undulating, and covered with scattered clumps of poplar and willow. Soil, generally, is first class. There is quite a settlement in this township.—*T. Kains, 1883*

Sub-division.—Covered with good poplar, fit for fencing and fuel, to the west of the Red Deer River, which divides the township—running in a north-easterly direction. East of the river is principally covered with underbrush and bluffs of poplar and willow, alternating with areas of open prairie. Along the river good spruce occurs, averaging 18 inches, and good for building purposes. The soil is a good black loam, 4 to 18 inches deep, and classes 1 and 2. Well watered, and well suited for farming.—*M. J. Charbonneau, 1884.*

- 38. Outlines.**—The north-west is submerged by Swan Lake. The margin, for about 10 chains inland, is a hay marsh. Numerous ponds and hay marshes in the south-west, and timbered with poplar and willow, intermingled with spruce. Soil, good. Class 1.—*M. Aldous, 1880.*

East, undulating country, with scattered clumps of poplar and willow. Red Deer River crosses the south-east, leaving by Section 13. North of the river this township is heavily timbered with poplar. The Bow River trail to Edmonton crosses the line between Sections 24 and 25. Quite a settlement in the vicinity of the Red Deer River and Bow River trail. The soil, generally, is first class. Some fine spruce close to the river.—*T. Kains, 1883.*

Sub-division.—Largely covered with poplars, from 4 to 12 inches through, with a thick underbrush of willow, and some scattered birch in the northern and central parts of the township. Some considerable islands of spruce occur in the north-west, and along a small creek leading from Swan Lake to the Red Deer River, and also along the river. The trees are of large size—up to 20 inches in diameter. The only open prairie is east of the river and across the south-east corner. The soil is a rich black loam, 8 to 12 inches deep.—*M. J. Charbonneau, 1883-84.*

- 39. Outlines.**—North, undulating, and comparatively open. West, Blind Man's River crosses the township from Section 20. The

country here on both sides of the river is only scattered with poplar, but generally all south of the river is densely timbered.—*C. A. Magrath*, 1882.

West, level prairie, timbered with poplar and low willows intermingled with birch in Sections 29 and 32. Soil, excellent. Class 1. Blind Man's River, having fine clear water and rapid current, crosses in 20.—*M. Aldous*, 1880.

Sub-division.—The north part is covered with clumps of poplar and a thick growth of underbrush and willow. A deep fresh-water lake breaks upon Sections 21, 28 and 29, the south shore of which is covered with large poplars and scattered birch. The north-eastern part is rather wet, but the soil is first class. The banks of Blind Man's River are 80 feet high. The south part is heavy-rolling and entirely covered with poplar bush, varying from 4 to 14 inches in diameter, with occasional clumps of spruce, more particularly near Blind Man's River. The soil is rather sandy, and class 2, and not favorable for agricultural purposes.—*M. J. Charbonneau*, 1884.

40. *Outlines*.—North, in Section 35, the line enters Gull Lake, which is about twelve miles long and from three to four miles wide. On the east side of the lake the country is densely covered with poplar and high grey willows. There are pike in this lake. Soil, second class. The surface eastwards is level, and, except in the north-east, is covered with a dense growth of poplar. Soil, first class. South, undulating and comparatively open.—*C. A. Magrath*, 1882.

West, open prairie, with patches of poplar and willow. Excellent soil. Class 1. Section 32 and part of 29 are submerged by Gull Lake. In the south-west are a number of small ponds, lakes and marshes. An old cart trail to Rocky Mountain House crosses the line.—*M. Aldous*, 1880.

41. *Outlines*.—Is more or less densely wooded with poplar, willows, and a few belts of spruce of fair size, mixed with tamarac and interspersed with beaver meadows. A ridge of high land, covered with poplar bush, runs northerly along the second tier of sections from the east; the remainder, to the west, is covered by Gull Lake. Soil, generally, first class, consisting of a black sandy loam of considerable depth, but in some instances with a clay subsoil of a depth of about 18 inches. The south-east corner of this township is partly open, and covered with willow and willow scrub, with a few bluffs of second-growth poplars.—*C. F. Miles*, 1884.

Gull Lake covers much of the township. On the east side of the lake the country is densely covered with poplar. Soil, second class.—*C. A. Magrath*, 1882.

42. *Outlines*.—West, prairie, rough and broken in Sections 17 and 20; covered with scattered poplar and scrub, intermingled with spruce in 29. The greater part of 5 is submerged by Gull Lake.—*M. Aldous*, 1880.

Is adjacent to the Fifth Initial Meridian, and comprises little more than three tiers of sections. Sections 1 and 36, having been burnt over repeatedly, are now covered with willow scrub, in many places very dense. The remainder of this township is more

or less densely wooded with poplar and willows, with a few belts of spruce of fair size, and some small tamarac. Soil, generally first class, consisting of a black sandy loam, which grows lighter towards the north. Part of the north-east quarter, although not lying very low, has been flooded at times by old beaver dams, which, however, could be prevented by the removal of these artificial obstructions. Is drained by a creek, tributary to Wolf Creek, running north-easterly across Section 36.—*C. F. Miles*, 1884.

43. *Outlines*.—Eastwards, rolling country, mostly wooded, but a great part has been overrun by fire, and nearly all the timber destroyed. Soil, poor and gravelly. Second class.—*L. R. Ord*, 1883.

Sub-division.—A small lake in Sections 15 and 16 is the source of a creek, which, meandering south-easterly, enlarges in Section 1 into another lake. The valley of the creek is from two to two and a-half miles wide, covered generally with a dense growth of scrub, and in the west tier of sections bluffs of poplar and spruce. On the south side of the valley there is a narrow belt of spruce, and a few clumps on the north side. The balance of the township is hilly. To the north of the valley the supply of wood is limited to a few bluffs of poplar; but on the hillside to the south, there is a good supply of poplar, increasing in size to the west. The soil is sandy in the south, but heavier to the north, and ranks second and third class.—*J. A. Kirk*, 1884.

44. *Outlines*.—North, the country is partially covered with small poplar, from 2 to 6 inches in diameter, and with scattered clumps of spruce, together with muskegs and swamps.—*T. Kains*, 1882.

East, rolling country, generally wooded with poplar of small and medium sizes, and a few patches of marshy prairie. No timber of value. The soil is of little worth for cultivation, as it is very shallow, with sandy and gravelly subsoil. It is rated third class.—*L. R. Ord*, 1883.

Sub-division.—The land is hilly. Bluffs of poplar are scattered through the township, and in the valley of a small stream running north-easterly. There are some clumps of spruce, many of which are dying from the excessive growth of moss. The larger portion of the township has been overrun by fire, and a dense second growth of poplar has sprung up, with which the dead wood is entangled, so as to be almost impassable. The soil is light, and will rank classes 2 and 3.—*J. A. Kirk*, 1884.

45. *Outlines*.—High-rolling country, mostly wooded with poplar, willow, scrub and a few spruces. The line, in Sections 36 and 25, passes through a large muskeg, in which is situated Pigeon Lake Creek, flowing south. This stream crosses the line several times in 36, and then passes eastward. There are a number of smaller muskegs and marshes occurring at various points. On the southern half of Section 1 the line is crossed by the Battle River. The land is rated class 3 as far north as the middle of Section 25, and from thence class 4. The alluvial soil consists of sandy loam, 7 to 10 inches deep; the subsoil of clay.—*J. J. McArthur*, 1884.

- 46. Outlines.**—The surface is generally rolling, and is heavily wooded, chiefly with poplar, but the northern portion of Section 36 is covered with heavy spruce, and some balsam or jack pine. Belts of tamarac and spruce occur in several other places. The land rates class 3, the soil consisting of sandy loam, 9 inches in depth, on a clay subsoil. Marshes and muskegs occur in the south.—*J. J. McArthur, 1884.*
- 47. Outlines.**—Rolling and undulating country, heavily wooded with poplar, spruce and some birch. The soil consist of sandy loam, 7 inches deep, on a clay subsoil, and the land rates class 3.—*J. J. McArthur, 1884.*
- 48. Outlines.**—The country along the east boundary is heavily wooded with poplar, spruce, birch and tamarac. In the south of Section 13 is Witch Lake—shores marshy. On 12 is a very small stream flowing east. Water in marshes or swamps occurs on every other section, except 24. Soil, sandy loam ; subsoil, clay. Class 3.—*J. J. McArthur, 1884.*
- 49. Outlines.**—The country, along the east boundary is, for the most part, densely wooded with poplar and willow. Alluvial soil, 6 inches, on sandy loam ; subsoil, clay. Class 3. Southwards, a few small marshes. On Section 24 a creek flowing west, and on 25 two branches of a creek flowing north-west.—*J. J. McArthur, 1884.*
- 50. Outlines.**—Densely wooded with poplar and willows, and there is abundance of water. Good sized marshes were crossed and, in Section 12, a creek, which flows northward, through a deep cou-lée, timbered with poplar, till it enters the North Saskatchewan River, which crosses the township. Another tributary of this river flows south-westerly from a tamarac muskeg. In the north of Section 36 is a larger muskeg, bordered with tamarac and spruce. Alluvial soil, 6 inches of sandy loam ; subsoil, clay. Class 3.—*J. J. McArthur, 1884.*
- 51. Outlines.**—Rolling and undulating country, densely wooded with poplar. Some willows and scattered spruce and tamarac muskegs occur at intervals, one of which extends across the entire width of Section 1. Most of the land is rated class 3, the soil being a sandy loam, 6 inches deep, on a clay subsoil.—*J. J. McArthur, 1884.*
- 52. Sub-division.**—Fractional township. Only consists of two-thirds of the easterly tier of sections. Surface, rolling. Soil, good ; water plentiful ; timbered with spruce and poplar bluffs.—*G. A. Simpson, 1883.*
- 53. Sub-division.**—Fractional township. Only consists of about the easterly tier of sections. Surface rolling. Soil, good ; heavily timbered.—*G. A. Simpson, 1883.*
- 54. Sub-division.**—Fractional township. Only consists of about the easterly tier of sections. Surface, very hilly. Soil, class 2. Water plentiful.—*G. A. Simpson, 1883.*

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XXIX.

2. *Outlines.*—Is very rough, and broken by points of hills jutting out from the Rockies. The soil is poor, and grazing not very good. The Kootenai Lakes and Waterton River are about the middle of the township.—*F. W. Armstrong*, 1883.
3. *Outlines.*—Is very broken and gravelly. The land is much broken by sloughs, and covered with willows, scrub and young poplar.—*F. W. Armstrong*, 1883.
4. *Outlines.*—Is very much broken by sloughs, and covered with islands of poplar, scrub and willow brush. The grass is good and water plentiful. A good summer grazing ranche, but snow lies too deep in winter.—*F. W. Armstrong*, 1883.
7. *Outlines.*—Is divided in two by the Old Man's River. The north half is rather broken by gullies, but the grass is good. The south half, though hilly, is an excellent grazing lease, having good and numerous springs scattered through it, and good shelter for cattle under the ridges. Pincher Creek also flows through the south-east corner of this township.—*F. W. Armstrong*, 1883.
8. *Outlines.*—North, going west, the country gradually slopes to Beaver Creek, which is crossed on the east side of Section 35. It runs to Old Man's River. As far as the west side of Section 33 the country is undulating, with many gullies running to Beaver Creek. Soil, rather light. In Section 32 is a high hill wooded with pine, spruce and balsam.—*C. E. Wolff*, 1882-3.

Is very broken and hilly, being at the south end of the Porcupine Hills. Tennessee and Beaver Creeks flow through this township on their course to the Old Man's River. Some excellent grazing land and some scattered spruce timber along these creeks.—*F. W. Armstrong*, 1883.
9. *Outlines.*—West, very hilly, and in many places densely wooded with small spruce and balsam. There is also some very good pine and spruce. Near the south end of Section 31, the line strikes Beaver Creek. East, the line runs through the Porcupine Hills. The country is very rough, and greatly cut up with deep coulées. The soil in the valleys is generally composed of a black sandy loam, with clay and gravel subsoil.—*C. E. Wolff*, 1882-3.
10. *Outlines.*—Along the west boundary the soil is rated class 4, the surface being very hilly, broken and rocky. It is generally wooded with pine, and sometimes small poplar and willow. The alluvial soil, where there is any, is generally a grey clay. On Section 6 the line crosses a great many bends of Beaver Creek, and on the south of 7 the east branch of that stream, which joins the main channel a few rods to the west. Two arms of another creek are

crossed in the north part of Section 31. East, very rough and hilly, cut up with deep coulées. The soil in the valleys is generally composed of a black sandy loam, with clay and gravel subsoil.—*C. E. Wolff*, 1882-3.

11. *Outlines*.—Hilly. There is a good deal of pine timber, but of inferior quality. The valleys are admirably adapted for ranching purposes, the grasses being rich, and a never-failing supply of water from creeks and numerous springs. The south Fork of Willow Creek runs through the northern portion. The grass is good.—*F. W. Armstrong*, 1882.

12. *Outlines*.—North, along the base line the country is hilly. In the valleys, some of which are one mile wide, the vegetation is luxuriant. Soil, rich black loam.—*C. A. Magrath*, 1882.

West, is very broken and hilly, forming part of the Porcupine Hills. There is little or no timber in this township. Trout Creek flows through the township, and is situated in a valley about two miles broad, and sloping gradually to the creek. The grass is good and water plentiful, there being a large number of springs in the side hills.—*F. W. Armstrong*, 1882.

In the Porcupine Hills there is some large pine and spruce. The country is very broken. On the tops of the hills the soil is light and somewhat stony, but in the valleys it is mostly a rich black loam, with clay subsoil. In Section 7 the line crosses the south Fork of Willow Creek. This stream is in a valley about a half a mile wide, and is full of very fine trout. There is considerable small poplar and willow scrub as far south as Willow Creek, but on the balance of the line there is no timber. The ground is considerably cut up with gullies running to Willow Creek.—*C. E. Wolff*, 1882-3.

13. *Outlines*.—Is very rough, broken and hilly. The soil is a rich, dark loam, and the grass good and long. There is some spruce timber to the south of Trout Creek, well adapted for building purposes, and some dry, scattered trees throughout the northern portion. Trout Creek flows from west to east, through the southern portion.—*F. W. Armstrong*, 1882.

East, along the meridian the country is hilly; in the valleys, some of which are one mile wide, the vegetation is luxuriant. Soil, rich black loam. South, the country is hilly; in the valleys, the vegetation is luxuriant. Soil, rich black loam.—*C. A. Magrath*, 1882.

14. *Outlines*.—Is hilly and broken. Willow Creek flows through the southern portion, in a valley 100 feet deep, the banks on both sides being very steep and rocky, and only accessible in places. The stone in these banks is a hard sandstone, well suited for building purposes. There is no timber, except along the creek. The northern portion is thickly covered with willow scrub. The grass is good and water plentiful. An excellent cattle ranche.—*F. W. Armstrong*, 1882.

Along the east the country is hilly; in the valleys, some of which are one mile wide the vegetation is luxuriant. Soil, rich.

black loam. Musquito Creek crosses Section 13, flowing east.—*C. A. Magrath*, 1882.

Sub-division.—Lies in the Porcupine Hills, and is hilly prairie. Large ravines run south into the valley of Willow Creek, making the township very broken. The valley of the creek narrows in Sections 4, 5 and 6 into a mere gorge, the banks, in places, being perpendicular precipices. In the bottoms fine spring creeks run, having abundance of clear water. Sections 13, 23, 24 and 26 in the valley, contain the best farming land; the balance of the township is excellent for grazing. The soil is a black loam, 4 to 10 inches deep, on a clay subsoil. Ghost Pound Creek runs through Sections 4, 5 and 6, is fringed with willow and poplars, the latter averaging 6 inches, but very scattered. The south-west quarter of Section 4 contains a bluff of 40 or 50 spruce trees of 12 inches in diameter. Sections 20 and 29 have some willow bluffs—mixed with poplar scrub—along the hill sides.—*John Francis*, 1883.

- 15. Outlines.**—The west lies in the northern part of the Porcupine Hills. The country is very broken and greatly cut up with deep coulées. The soil is a rich clay, from 18 to 30 inches deep. The grass in the valleys is very luxuriant. The tops of the hills are generally gravelly, and the grass lighter.—*C. E. Wolff*, 1883.

East is excellent, undulating prairie, with deep black loam. Towards centre of the township are the Porcupine Hills. These hills are, here, of very good soil, and long grass; and, in places, there are outcrops of horizontal layers of a coarse and somewhat soft sandstone. One hill measured 1,000 feet above its valley. To the south-west woods of pine could be seen.—*O. J. Klotz*, 1882.

Sub-division—In the Porcupine Hills, which, here, reach an elevation of 1,000 feet. On the hill sides are patches of poplar. Vegetation is luxuriant, and the rainfall copious. In some of the ravines grass grows high enough to hide a horse. On the summits of some of the elevations areas of rolling prairie occur, where the grass cures early; but in the ravines it freezes while green. Springs of the coldest water break from the hill sides everywhere. The soil is a black loam. Class 1.—*J. A. Kirk*, 1883.

- 16. Outlines.**—North, dry, rolling plains. No water to be had at time of survey (10th August), except in Mosquito Creek.—*M. Aldous*, 1881.

In the west lies the north end of the Porcupine Hills. The country is very broken, and greatly cut up with deep coulées. The soil is a rich clay, from 18 inches to 2½ feet deep. The grass in the valleys is very luxuriant. The tops of the hills are generally gravelly, and the grass lighter.—*C. E. Wolff*, 1883.

Eastwards, is excellent undulating prairie, with deep black loam. Mosquito Creek is in the northern part, and was (13th September) only a succession of pools of good water.—*O. J. Klotz*, 1882.

Sub-division.—Open prairie. The two northern tiers of sections are undulating; the balance is in the Porcupine Hills, and extremely rough and broken by ravines 400 to 500 feet deep. The rainfall is copious and the vegetation luxurious. Beautiful

springs of cold water burst from the hillsides everywhere. The pasture is splendid in summer, but poor in winter, as the grass freezes while green. Soil, is a rich black loam. Class 1.—*J. A. Kirk*, 1883

17. *Outlines*.—The west is undulating. The soil is sand and gravel, with clay subsoil, and in many places covered with small surface stones.—*C. E. Wolff*, 1883

The east is good undulating prairie of black loam. Grass heavy and matted.—*O. J. Klotz*, 1882.

Southwards, dry, rolling plain, except in Mosquito Creek and Valley, which crosses the southern quarter of the township.—*M. Aldous*, 1881.

Sub-division.—Rolling prairie, broken by deep ravines. The soil is generally a black or a sandy loam, overlaying a friable clay. On the higher places or ridges it is gravelly and stony. Mosquito Creek crosses the southern part of this township in a deep, broad valley. Owing to the broken nature of the land it is better for grazing; but settlers in the Mosquito Valley could, by using the stream for irrigating, obtain a handsome return.—*J. A. Kirk*, 1882

18. *Outlines*.—The west is undulating. The soil is sand and gravel, with clay subsoil, and in many places covered with small surface boulders. In Section 30 High River was crossed, running east in a valley about 60 feet deep. The river is about $2\frac{1}{2}$ chains wide, and the water about 4 feet deep, with a very rapid current.—*C. E. Wolff*, 1883.

The east is undulating prairie, of good black loam, with a good growth of grass. Little Bow River crosses Sections 25 and 36.—*O. J. Klotz*, 1882.

Sub-division.—Rolling prairie. Soil, black loam—class 1—on friable clay. The High River flows through the north-west. It is a mountain stream, fed by melted snows, and alive with trout. At high water, in June and July, it is a perfect torrent, and dangerous to ford. Its banks are lined with fine cottonwood and poplar, and the flat or bottom land of the valley is admirably situated for irrigation. The present settlers are using this method for root crops and oats, and for hay, but not yet for wheat. Hay meadows in the north-east corner.—*J. A. Kirk*, 1883.

NOTE.—All the townships, from here northwards in this range, adjoin the 5th Initial Meridian, and are fractional.

19. *Outlines*.—West, rolling prairie, much broken by hills and coulees in Section 18, where a valley 100 feet below the surrounding country was crossed. Tongue Creek, running through a narrow valley, from 80 to 100 feet deep, crosses in 19. No wood.—*M. Aldous*, 1880.

The east is undulating and level prairie. The soil is a rich clay loam. The grass is, in every case, rich and plentiful. In Section 24 Tongue Creek was crossed, about 25 links wide and 1 foot deep, with sluggish current. In Section 1 High River was crossed, running east, where the line crosses, but it turns north shortly after crossing. The valley is heavily wooded with large

cottonwood, poplar and willow. The river is about $1\frac{1}{2}$ chains wide, 4 feet deep, and has a very rapid current.—*C. E. Wolff*, 1883.

Sub-division.—Soil, a clay loam, 10 inches deep, on a clay subsoil. High River crosses the south boundary in Section 2 and runs north-easterly through Sections 1 and 12. The land on both sides of the river is well settled. Tongue Creek runs easterly through the township. The stream is about 10 links wide and 18 inches deep (September). The McLeod trail crosses the township.—*R. C. McPhillips*, 1883.

- 20.** *Outlines.*—Along north boundary the land is excellent, and has been ranked as first class, the soil being like the Manitoba black loam.—*T. Drummond*, 1882.

West, rolling prairie, with a good soil—class 1—excepting Sections 19 and 30, which are light and gravelly, and rated class 2. Sheep Creek, running through a wooded valley three quarters of a mile wide, crosses in 30. A coulée is intersected in 19.—*M. Aldous*, 1880.

The east, undulating prairie. The northern portion is covered with small willow and young poplar. The soil is rich black sandy loam, with good clay subsoil, and is excellent farming or grazing land. In Section 24 Sheep Creek was crossed, in a valley about 75 feet deep and about one mile in width. This creek is about 3 chains wide and about 3 feet deep, and its valley is well wooded with cottonwood and poplar.—*C. E. Wolff*, 1883.

Sub-division.—The western tier of sections—adjoining the 5th Initial Meridian—is fractional. The soil is generally a clay loam of, 8 to 10 inches, on a clay subsoil. Along Sheep Creek the soil is a sandy loam on a clay subsoil. There is some timber along the creek, principally of a small size. The McLeod trail traverses the township. A number of settlers are located.—*R. C. McPhillips*, 1883.

- 21.** *Outlines.*—West, rolling prairie, much broken in Sections 19 and 30 by a large coulée, 100 feet deep, having a number of ponds surrounded by marsh. A cart trail from Fort McLeod to Calgary in 31, a ravine in 18, and a small marsh in 6, were intersected. Soil, good. Class 1. No wood.—*M. Aldous*, 1880.

East, high-rolling prairie. The soil is a sandy loam, with subsoil of sand and gravel.—*T. R. Hewson*, 1883.

Southwards, the land is excellent, being first class black loam.—*T. Drummond*, 1882.

Sub-division.—Soil, good clay loam. There are a few good hay swamps throughout, and in the south some scattered willow brush. The westerly tier of sections is fractional. The Fort McLeod trail passes through the township.—*R. McPhillips*, 1883.

- 22.** *Outlines.*—West, open prairie, with a good soil, having a few stones in places. Class 1. Northern half is broken by Bow River, which flows through a valley over one mile wide in places, and crosses the line in Section 31 and on boundary line between 19 and 30. Pine Creek in 7; hills, 150 feet high, in 18, and an Indian trail in 19, were intersected.—*M. Aldous*, 1880.

On the eastern side this township, as far north as the Bow River, which is crossed by the western boundary on Section 12, is high-rolling prairie, with sandy loam soil, having a subsoil of sand and gravel. On the north side of the Bow River the soil consists of a rich black loam, with a sandy subsoil.—*T. R. Hewson*, 1883.

Sub-division.—The Bow River enters on Section 32 ; again on 20 ; then crosses 20, 17, 8, 9, 4, 3, 10, 11 and 12, discharging on the last numbered section. The land along the river is a sandy loam, and in the remainder of the township it is a clay loam, of 8 or 10 inches, on a clay subsoil. The land is class 2 for farming, and is valuable for grazing. Quite a number of settlers are located here.—*R. C. McPhillips*, 1883.

23 *Outlines.*—West, rolling prairie, with a very stony soil. Class 2. Bow River, being about 30 chains wide at this point, is crossed in Section 4. A ridge, 50 feet high, in 21, and a small marsh in 16, were intersected. No wood along the line.—*M. Aldous*, 1880.

Eastwards, the surface is rolling and knolly. Soil, a fair black clayey loam, from 12 to 18 inches deep ; subsoil, hard clay. Some small meadows.—*W. Ogilvie*, 1882.

Sub-division.—Contains only twenty-four sections and irregular quarter-sections along the Fifth Initial Meridian. Is an open, rolling prairie, composed of a sandy and gravelly soil, and very dry. Some hay sloughs occur. The C.P.R. crosses the centre of the township, and the Bow River the south-west corner.—*C. E. LaRue*, 1883.

24. *Outlines.*—Surface rolling along the north boundary. Loamy clay soil. Surface rolling along the east boundary, and knolly. Soil, a fair black clayey loam, from 12 to 18 inches deep. Some small meadows.—*W. Ogilvie*, 1882.

West, open, rolling prairie, with a light and gravelly soil. Class 2. An elbow of the Bow River was intersected in Section 9 ; also a coulée and small creek in 16.—*M. Aldous*, 1880.

Sub-division.—Rolling prairie, composed of a sandy and gravelly soil, with a gravel subsoil, and very dry. Some hay sloughs are to be found, but only a few. This township contains only twenty-four sections, and forms irregular quarter-sections along the Fifth Initial Meridian. The Edmonton trail crosses the central portion, and the Bow River touches the western boundary.—*C. E. LaRue*, 1883.

25. *Outlines.*—Eastwards, rolling prairie, with many marshes. Clay soil—class 1—and capital grazing.—*T. Fawcett*, 1883.

Sub-division.—May be rated first class for agricultural purposes. Is gently-rolling, or nearly level prairie. The soil is remarkably rich and easily tilled. There are several good hay marshes, from which hay has been taken and stacked for several years. The grass is rich and luxuriant. There was no running water, but the appearance of the country leads to the supposition that water may be obtained very near the surface. Fuel may be obtained at the Bow River for the wants of settlers.—*S. L. Brazazon*, 1884..

- 26** *Outlines.*—Eastwards, undulating prairie, with fewer marshes than township 25. Soil, clay loam, 12 to 20 inches deep. Class 1. Good land.—*T. Fawcett*, 1883.

Sub-division.—Suitable for settlement. Soil, superior quality; surface, generally rolling—rather heavily towards the north—and with the exception of a range of hills from the middle, along the western boundary—the tops of which are gravelly and stony—there is very little inferior land. These hills are, however, very small. There are a few marshes from which hay may be cut, and there is an abundant supply of fresh water. Nose Creek follows the western outline, and there are two small lakes in the township—one in Section 2 and the other on the east boundary of 34. The water in the latter is clear and sweet. There are some large boulders in the north.—*S. L. Brabazon*, 1884.

- 27.** *Outlines.*—Eastwards, rolling and undulating prairie, with many marshes and scattered willows. Soil, clay loam—class 1—on clay subsoil. Splendid grazing land.—*T. Fawcett*, 1883.

Sub-division.—Undulating prairie. A small creek of good water runs through the south part. There is a lake in Sections 25 and 26, the water of which is fresh, but not very good. A part of a new trail from Calgary to Edmonton crosses the west. Soil, a black loam, with a clay subsoil, and rates class 1.—*L. Gosselin*, 1884.

- 28.** *Outlines.*—Northwards and eastwards, undulating prairie. Soil, clay loam. Classes 1 and 2. Capital land and good grazing. Poplar bluffs in various parts of the township along the banks of the small streams.—*T. Fawcett*, 1883.

Sub-division.—Undulating prairie. A deep ravine, containing a spring creek, furrows the north of this township in a south-easterly direction. Small poplars are to be seen along the south bank of this ravine, suitable for fuel. Soil, a black loam on a subsoil of clay, and class 1.—*L. Gosselin*, 1884.

- 29.** *Outlines.*—Rolling prairie, cut by numerous coulées discharging towards the south-east. Soil, fair, but shallow in places, ranking second class.—*L. R. Ord*, 1884.

- 30.** *Outlines.*—Rolling prairie, crossed by the head waters of Rosebud River. Soil, of fair quality, ranking second class.—*L. R. Ord*, 1884.

NOTE.—Townships 31 to 34 consist of only a narrow strip adjoining the Fifth Initial Meridian.

TOWNSHIPS WEST OF FOURTH INITIAL MERIDIAN.

RANGE XXX.

NOTE—All the townships in this range adjoin the Fifth Initial Meridian, and are fractional.

4. *Outlines.*—Is a heavy-rolling prairie, covered with willow scrub and bluffs of poplar. Good grass and water, but it is of no use for winter ranche, on account of the depth of snow. The Forks of the Waterton, which flow through this township, divide it into three different parts. These streams flow in valleys 150 to 200 feet deep, and are very rapid. Their source is in the mountains.—*F. W. Armstrong*, 1883.
5. *Outlines.*—Is very broken by the foot hills. An excellent grazing ranche in summer. Some good hay land, and plenty of water. Not much timber, but plenty of willow, poplar, underbrush and scrub.—*F. W. Armstrong*, 1883.
6. *Outlines.*—Good farming land, as far as soil is concerned. Good grass, and fairly well watered. Pincher Creek flows through this township. The land along the creek is all taken up.—*F. W. Armstrong*, 1883.
7. *Outlines.*—Broken and hilly. Some deep gullies run back from the Old Man's River, which flows through it. No timber, except along the river. where there is a little spruce, poplar and cottonwood. Good grass and water. Excellent cattle ranche.—*F. W. Armstrong*, 1883.
8. *Outlines.*—North, very broken and hilly.—*C. E. Wolff*, 1882-3.
Timber very scattered and of poor quality. Good grazing country, but unfit for settlement.—*F. W. Armstrong*, 1883.
9. *Outlines.*—Very broken and hilly. The north sides of the hills are all well timbered with spruce and white pine, of various sizes and quality. In the valleys and on the south sides of the hills the grass is plentiful and good. Water is in abundance everywhere in streams from the hills. Beaver Creek crosses the north-east corner in Section 36.—*F. W. Armstrong*, 1883.
10. *Outlines.*—Very broken and hilly. Some good spruce timber. Unfit for settlement. The south part will make a fine cattle ranche. as grass and water are plentiful, and good on latter portion.—*F. W. Armstrong*, 1883.
Hilly. The valleys are admirably adapted for ranching purposes, the grasses being rich, and a never-failing supply of water from the creeks and numerous springs. Abundance of timber for building and fuel.—*C. E. Wolff*, 1882-83.
11. *Outlines.*—Very broken and rough. Amongst Porcupine Hills. Unfit for settlement. Good grass and water. Some spruce groves scattered through it.—*F. W. Armstrong*, 1883.

Hilly. There is a good deal of pine timber, but most of it is of an inferior quality. In the valleys the grasses are rich, and from the creeks and numerous springs, and there is abundance of water.—*C. E. Wolff*, 1882-83.

- 12. Outlines.**—Along the north boundary the country is hilly; in the valleys, some of which are one mile wide, the vegetation is luxuriant. Soil, rich black loam.—*C. A. Magrath*, 1882.

Very broken and rough. Amongst Porcupine Hills. Unfit for settlement. Good grass and water. Some spruce groves scattered through it.—*F. W. Armstrong*, 1883.

East, going south, the line runs in the Porcupine Hills. In Sections 36 and 25 there is some large pine and spruce. The country is very broken. The soil in the valleys is a rich black loam, with clay subsoil. In Section 12 the line crosses the south Fork of Willow Creek. This stream is in a valley about half a mile wide, and is full of very fine trout. There is considerable small poplar and willow scrub as far south as Willow Creek, but on the balance of the line there is no timber. The ground is considerably cut up with gullies running to Willow Creek, and to a small creek which crosses the line in Section 1.—*C. E. Wolff*, 1882-83.

- 13 Outlines.**—Is very rough, broken and hilly. The soil is a rich dark loam, and the grass good and long. There is some spruce timber to the south of Trout Creek, well adapted for building purposes, and some dry scattered trees throughout the northern portion. Trout Creek flows from west to east through the southern portion.—*F. W. Armstrong*, 1883.

- 14 Outlines.**—East is hilly and broken. Willow Creek flows through the southern portion, in a valley 100 feet deep, the banks on both sides being very steep and rocky, and only accessible in places. The stone in these banks is a hard sandstone, well suited to building purposes. There is no timber, except along the creek. The northern portion is thickly covered with willow scrub. The grass is good and water plentiful. An excellent cattle ranche.—*F. W. Armstrong*, 1883.

Sub-division.—Is fractional, being one mile and 68 chains wide, and is situate in the Porcupine Hills. Sections 1 and 2 are crossed by Willow Creek. Sections 13, 24 and 25, in the valley of a spring creek, are, in part, fit for farming; the balance is good grazing land. Soil, a black loam, of 4 to 12 inches deep, on a clay subsoil. Willow Creek is fringed with willows and a few poplars, 4 to 6 inches in diameter.—*John Francis*, 1883.

- 15. Outlines**—East, the country is very broken. The soil is a rich clay, from 18 inches to 2½ feet deep. The grass in the valleys is very luxuriant. The tops of the hills are generally gravelly, and the grass lighter.—*C. E. Wolff*, 1883.

Sub-division.—Is fractional, and only about 47 chains wide. Is located on the north slope of the Porcupine Hills. The watershed or height of land between Willow and Musquito Creeks lies across Section 12. Soil, black loam, 12 inches deep, on clay sub-

soil. Good land, but rolling heavily, and supporting bluffs of willow.—*John Francis*, 1883.

- 16.** *Outlines*.—East, north end of the Porcupine Hills. The soil is a rich clay, from 18 inches to 30 inches deep. The grass in the valleys is very luxuriant.—*C. E. Wolff*, 1883.

Sub-division.—Is fractional, being only $46\frac{1}{2}$ chains wide. The surface consists of heavy-rolling prairie, well supplied with water by a spring creek running into Musquito Creek. The soil is a dark clay loam, 8 to 10 inches deep, on a clay subsoil. No wood.—*John Francis*, 1883.

- 17.** *Outlines*.—East, undulating. The soil is sand and gravel, with clay subsoil, and in many places covered with small surface boulders.—*C. E. Wolff*, 1883.

Sub-division.—Fractional. Rolling prairie. Soil, black loam—class 1—on clay subsoil. A branch of the Musquito Creek runs through the south part, but usually dries up as the summer advances. There are exposures of coarse sandstone along the creek.—*J. A. Kirk*, 1883.

- 18.** *Outlines*.—East, undulating. The soil is sand and gravel, with clay subsoil. Some small surface boulders. In Section 25 High River was crossed, running east in a valley 60 feet deep. The river is about $2\frac{1}{2}$ chains wide, and the water about 4 feet deep, with a very rapid current.—*C. E. Wolff*, 1883.

Sub-division.—High River flows through this township in a wide valley, which is a tangled mass of scrub, with a few cottonwood trees, of about 8 or 10 inches. The soil is a black loam on clay subsoil.—*J. A. Kirk*, 1883.

TOWNSHIPS WEST OF FIFTH INITIAL MERIDIAN.

RANGE I.

4. *Outlines.*—There is only a small portion of the eastern part that is not in the mountains. Is very rough and broken, and the land is covered with scrub, small spruce and poplar. One of the north branches of the Waterton River was crossed in Section 13.—*F. W. Armstrong*, 1883.
5. *Outlines.*—The eastern portion is very much broken by gullies, and the foot hills of the mountains. The land is covered with scrub and poplar timber. There is some good spruce near the southern boundary. The western part is in the mountains.—*F. W. Armstrong*, 1883.
6. *Outlines.*—Some portions are fit for settlement. An excellent cattle ranche. The South Fork of the Old Man's River runs through this township. Part of it is amongst the foot hills of the mountains. In the south of Section 18, the line is crossed by Mill Creek, flowing north-east to join the river, which intersects the line between Sections 18 and 19. In the east the line crosses a creek in Section 12, and Pincher Creek and the trail to the Police Farm in Section 24.—*F. W. Armstrong*, 1883.
7. *Outlines.*—The North, Middle and South Forks of the Old Man's River flow through this township. Good grass. Water in abundance and good shelter. There is some timber, poplar and cottonwood, along the river bottoms. An excellent pasture ranche. The snow never remains here longer than two or three days, owing to the prevalence of the "Chinook" winds.—*F. W. Armstrong*, 1883.

West, undulating. Soil, a rich black loam, clay subsoil. In Section 31 the line crosses the Middle Fork of Old Man's River—width, $1\frac{1}{4}$ chains; rapid current; 2 feet deep. The south side of river is lined with spruce and balsam, and the valley is generally covered with willow brush and some good poplar.—*C. E. Wolff*, 1882-83.
8. *Outlines.*—Going west on the north boundary, the first three and a-half miles are in the Porcupine Hills, and very rough. The soil is very gravelly, and the tops of the hills covered with a soft sandstone. There is some small pine and spruce on Sections 31 and 36. The North Fork of Old Man's River was crossed in the west half of Section 33. The river is about three and a-half chains wide, with about two feet of water. From the river going west, and then south along the west boundary, the country is undulating, the soil light and gravelly, with clay subsoil.—*C. E. Wolff*, 1882-83.

The east is in the Porcupine Hills. A creek crosses the line twice in Section 36, flows south, almost parallel to the line, and

again crosses it in Section 25, receiving a branch in Section 24. Not much timber. Good pasture.—*F. W. Armstrong*, 1883.

9. *Outlines*.—The east being in the Porcupine Hills is very hilly and broken. Some timber on north sides of hills. Good grass and water. Excellent pasture land.—*F. W. Armstrong*, 1883.

Sections 1 to 4 are in the Porcupine Hills, and very rough. The soil is very gravelly. Small pine and spruce on Sections 1 and 6. The North Fork of Old Man's River flows south through Section 4, with about 2 feet of water. Sections 5 and 6 are undulating, and the soil light and gravelly. This soil continues partly north along the west boundary, with intervening areas of clay.—*C. E. Wolff*, 1882-83.

10. *Outlines*.—West, undulating. Soil clay. The line crosses the North Fork of Old Man's River in Section 6. There is some good limestone at this point. In Sections 18 and 19 the line crosses in several places a creek which empties into the river.—*C. E. Wolff*, 1882-83.

East, is very hilly and broken. North sides of the hills covered with timber of spruce and poplar. Unfit for settlement. Good grass in the valleys and on the south sides of the hills. A good cattle ranche and plenty of water.—*F. W. Armstrong*, 1883.

11. *Outlines*.—West, this line is crossed by a number of deep ravines. On the third mile, going south, the line is crossed eight times by a creek about 20 links in width, which is a tributary of the North Fork of Old Man's River. There are many small creeks running out of the numerous ravines into it. The country is well adapted to grazing.—*T. R. Hewson*, 1883.

The east half is hilly and there is a considerable amount of spruce timber; good grass and plenty of water. The township is unfit for agricultural purposes, but there is good grazing land.—*F. W. Armstrong*, 1883.

12. *Outlines*.—The north boundary crosses numerous sandstone ridges averaging about 1000 feet in height. In the valleys between these ridges there is spruce and fir timber suitable for building, fencing and fuel. The soil, in general, is a rich clay loam averaging about 15 inches in depth, upon a sandstone or gravel formation. Numerous small mountain streams, averaging from 5 to 10 links in width, and which are tributaries of the South Fork of Willow Creek, are crossed by this line. The grass in the valleys, between the ridges, is very luxuriant, and the country well adapted for ranching purposes. The west line runs along the edge of the western ridge of the Porcupine Hills for about four miles southwards, from thence gradually descending into the wide valley between the hills and the Rocky Mountains. The line crosses a number of small creeks over the last three miles. There is timber at intervals.—*T. R. Hewson*, 1883.

The east half is very hilly, and there is a considerable amount of scattered spruce timber; good grass, and plenty of good water. The township is unfit for agricultural purposes, but there is good grazing land. The line crosses creeks in Sections 1 and 36, and

Trout Creek, running through a marsh, in 13.—*F. W. Armstrong*, 1882-83.

- 13. Outlines.**—The west line runs along the western edge of the Porcupine Hills, crossing a number of high sandstone ridges, and a very broken country generally, and the valleys of creeks which flow to Willow Creek. Wood is very scarce and small, being suitable only for fencing and fuel.—*T. R. Hewson*, 1883.

East, hilly country. Trout Creek crosses the line in Section 12, and branches in 1 and 12. Another creek, flowing north-eastwards, crosses the line in 13. Wood in places.—*M. Aldous*, 1880.

- 14. Outlines.**—The west line runs along the western ridge of the Porcupine Hills, crossing a very rough and broken country. The North Fork of Willow Creek is crossed by this line at about four miles from the southern boundary. There is scarcely any wood along this line, and what there is, is suitable only for fencing and fuel.—*T. R. Hewson*, 1883.

In the east the country is rough. Willow Creek and a branch cross the line in Section 1. Line crosses two streams in Section 13; one in 24; one in 25, and one in 36.—*M. Aldous*, 1880.

- 15. Outlines.**—East, hilly, open country, with a good soil. Class 1. The Porcupine Hills commence in Section 12, reach an elevation of 400 feet, and are covered with dead spruce. Small marshes in 24 and a couple of watercourses, running through ravines, in 13 were crossed.—*M. Aldous*, 1880.

- 16. Outlines.**—North and north-east, rolling prairie, with good soil in places. A creek, flowing north, crosses the line in Section 33. South-east, the country is hilly and open. Mosquito Creek crosses the line three times in Section 25. A tributary of this crosses the line once in 13, three times in 24, and three times in 25. Some stone and gravel in Section 36. Soil, excellent. Class 1. A low flat, with heavy poplar in 25.—*M. Aldous*, 1880.

- 17. Outlines.**—East and south, rolling prairie, with a first class soil. Sections 1 and 12 are slightly light and gravelly. A small creek, running north-east, crosses from Sections 4 to 13.—*M. Aldous*, 1880.

Sub-division.—Rolling prairie in the north and east, and hilly in the south and west, a spur of the Porcupine Hills running through the latter portion. The south and middle Forks of the High River join a short distance west of the western outline, and, flowing eastward, unite in the north part of Section 31 with the north fork, or main stream, of the same river. There is an exposure of excellent freestone in the banks of the river in this vicinity. On the hillsides and in the valleys is a luxurious growth of grasses, but the hilltops are generally gravelly and barren. Springs are numerous, and in the south part of the township several of them unite and form a branch of Mosquito Creek. The soil is generally black loam over clay, but near the river it gets sandy.—*J. A. Kirk*, 1883.

18. *Outlines*.—East, undulating prairie, with a good soil; slightly gravelly in southern half. Class 1. High River, with a bank on north side 50 feet high, while to the south, it is flat, and timbered with poplar and willow scrub, crosses in Section 25.—*M. Aldous*, 1880.

Sub-division.—High River flows north-easterly through the township, mostly in a canon cut through sandstone rock, which is universal in this district. In several places there are exposures of excellent grey freestone, and in Section 22 a seam of lignite, 1 inch thick, was observed. Seams several feet thick are reported exposed in the river banks, a short distance west of this township. Overlaying the rock is a layer of coarse gravel, which, in its turn, is overlaid with a friable clay, grey, and sometimes yellow in color, from 2 to 40 feet in thickness. The river is fed principally by the melting snow. It is said to be the best trout stream on this side of the Rocky Mountains. The scenery from its banks is very picturesque. At Section 22 the canon opens out into a wide valley, in which the banks are lined with thick scrub, through which is scattered some cottonwood timber, averaging 9 or 10 inches in diameter. On the south side of the river the line rises in a series of slopes. The soil is generally a black loam on a clay subsoil, but near the river the surface is, in many places, almost paved with small boulders. On the north side the land rises for about two miles. There is a marked difference in the grass as soon as the river is crossed. On the south side it is short and wiry, curing early in the season, but on the north side it is longer, and remains green for a longer time, and is probably useless for fodder in the winter, as grass frozen when green loses its nutritious properties. This difference is caused by a greater precipitation on this side of the river. Many times during the season, indeed invariably, storms coming from the mountains divided in the Foot Hills, one part following the ridge of high lands on the north side of the High River, the other keeping a south-easterly course through the hills leaving the rolling prairie at their base almost entirely without rainfall. Owing to the dryness of the land, agriculture without irrigation could not be carried on successfully; and, moreover, the supply of water in the rivers and creeks is comparatively limited.—*J. A. Kirk*, 1883.

19. *Outlines*.—West, rolling. Good grazing land. Soil, second class. Line crosses Tongue Creek and two marshes in Section 18, and another marsh in 31.—*L. Kennedy*, 1881.

East, rolling prairie. Tongue Creek crosses the line in Section 24. Timber was found in small quantities near the creek. The McLeod and Calgary trail crosses the line in Section 12.—*M. Aldous*, 1880.

Sub-division.—This township is principally rolling prairie. The soil is clay loam, with clay subsoil, except along the Tongue Creek, where the surface soil is a sandy loam. In the northerly part of the township there are some very high hills, but owing to their long slopes it is difficult to form an estimate of their height above the prairie level.—*R. C. McPhillips*, 1883.

- 20. Outlines.**—North and east, rolling to very hilly prairie. Soil, a rich black loam. Scrubby in Sections 34 and 35. A creek runs south through a marsh in 31 to join Sheep Creek, which crosses the east line in Section 25. There is timber in its vicinity. Two other streams cross in the same section.—*M. Aldous*, 1880.

West and south, rolling land; good grazing. Soil, classes 1 and 2. Sheep Creek and two branches cross the line in Section 30. Scattered poplar and brush in the vicinity of the Creek. Section 31 is marshy.—*L. Kennedy*, 1881.

Sub-division.—This township is very hilly. The soil is a clay loam, about 10 inches in depth, on a clay subsoil. Sheep Creek runs easterly across the township and along its banks. The surface soil is a sandy loam. Barter's Ranch is situated in the northwest quarter of Section 19. There is some wood along Sheep Creek, suitable for fuel and fence rails, consisting of poplar and willow.—*R. C. McPhillips*, 1883.

- 21. Outlines.**—North, rolling land. Soil, first class. Creeks cross the line, flowing north, in Sections 32 and 33. The cart trail to Calgary in Section 36. West, rolling and hilly. Soil, first class. Good grazing. Scrub, cottonwood and willows all along the line. A creek in Section 18.—*L. Kennedy*, 1881.

East, rolling prairie. Line runs in the bottom of a deep coulée through Section 24 and parts of 13 and 25. In Section 36 a trail. South, rolling prairie, with a rich black loam soil. A small creek in Section 35.—*M. Aldous*, 1881.

Sub-division.—The western part is mostly hilly, and has numerous springs of beautiful water. A large gully runs down the eastern tier of sections, and in it are two small alkaline lakes. The soil is a good black loam, on a clay subsoil. Class 1. There is considerable willow brush in the north and west of the township. There were no settlers at the time of survey, but a good many have located there since.—*R. C. McPhillips*, 1883.

- 22. Outlines.**—North, west and south, rolling and level prairie. Good grazing. Soil, first class. McLeod and Calgary trail crosses the township. Fish River was crossed in Section 35. Timber and scrub in the vicinity of the river, and in Section 31. Creeks cross the south line, flowing north in Sections 4 and 5. Scrubby in the vicinity of the creeks.—*L. Kennedy*, 1881.

East, rolling prairie. The line crosses Pine Creek in Section 1, a trail in 13 and the Bow River in Sections 24 and 36. Small quantity of timber in the vicinity of the river.—*M. Aldous*, 1880.

Sub-division.—The surface is generally rolling prairie, excepting the western tier of sections, which is very hilly. The soil is very good, being a black loam, 8 to 10 inches deep, on a clay subsoil. Pine Creek runs through Sections 6, 5, 4, 10, 11 and 12. The average width of the creek is about 7 feet, its depth about 1 foot, and the water good. Every available section is settled on. The Indian Department Supply Farm embraces all of Section 35, the greater portions 25, 26 and 36, and parts of 27 and 34. The Fort McLeod trail passes through the township. The Bow River runs through Sections 24, 25 and 36.—*R. C. McPhillips*, 1883.

23. Outlines.—In the north the country is open prairie, and the soil mostly second class. Going south, on the west side, however, the soil varies in quality, becoming better to the south, where it is class 1. The north line crosses the Calgary trail in Section 34, and two others in 32. Bow River was crossed in Section 36, also two creeks. Line crosses two creeks in Section 35. The Elbow River crosses the west boundary four times in Section 30, and passes out of the township on 33. Fish Creek crosses the southern tier of sections. Timber and scrub in the vicinity of the creek.—*L. Kennedy*, 1881.

Sub-division.—Rolling and hilly. It is traversed by a number of valleys. The alluvial soil is black loam in some places, and in others sand and gravel. The subsoil is sandy and gravelly. The Bow River flows southward through the eastern portion and the north-western and southern parts are traversed, the former by Elbow River and the latter by Fish Creek. On the banks of these streams there is a certain quantity of wood, poplar timber and heavy brush, fit and sufficient for the wants of the settlers in the township, as material for buildings, fences and fuel, during a period of about five years. Some very good crops of vegetables and oats were noticed on many settlers' claims. The results of their efforts, thus far, have been very encouraging to them. The township is well settled.—*C. E. LaRue*, 1883.

24. Outlines.—North, very hilly and rolling prairie. Soil is gravelly and sandy. The Edmonton and Calgary trail crosses the line in Section 35. Line crosses Nose Creek in Section 34 and Nose Hill in 32.—*M. Aldous*, 1881.

West and south, the country is all open prairie. Soil mostly second class. Bow River crosses the township from Section 19 to 1, and the Elbow River from 4 to Calgary. East of Bow River the land is stony.—*L. Kennedy*, 1881.

East, rolling prairie. An arm of Bow River crosses the line twice in Section 12. Nose Creek and Elbow River enter the Bow a short distance west of the line—the latter from the south. At the junction of the Bow and Elbow Rivers is situated Fort Calgary. On the line, some distance south of the quarter-section post, on Section 12, is an Astronomical Station, established by W. F. King, 1880.—*M. Aldous*, 1880.

Sub-division.—The surface is generally rolling and hilly, and the soil sandy and gravelly. Classes 2 and 3. The Bow River enters from the west, on the southern portion of Section 19, and pursues a gently-winding easterly course through a flat valley. It is entered on Section 14 from the south by the Elbow River, which flows north-easterly in a zigzag course from Section 4, and on Section 13 from the north by Nose Creek. From this point Bow River turns and flows southward through Sections 12 and 1. The width of this river is from 175 to 250 yards, and its depth, at low water, 3 to 6 feet. The Elbow River is 22 to 100 yards wide, and 1 to 1½ feet deep, at low water. Both these streams take their rise in the Rocky Mountains. The current in each is very rapid; the water fresh, pure and good, and the bottoms stony. The banks of each are, in places, from 50 to 100 feet high, and are

partially covered with poplar, willow and brush. At the junction of the rivers, on Section 14, is the town of Calgary, which will soon become one of the most important places in the North-West. Its geographical position, picturesque site, proximity to the Rocky Mountains, access to wood and timber by way of both rivers, and its ample supply of excellent water, all contribute to this end.—*C. E. LaRue*, 1883.

- 25** *Outlines*.—West, rolling and broken country. No water. Sections 30 and 31 in Nose Creek bottom. Nose Hill in 7 and 18.—*T. R. Hewson*, 1883.

East, open prairie, rolling and undulating, with a light and gravelly soil. Class 1. South, hilly and rolling. Soil, gravelly and sandy. Nose Creek flows south through the township, leaving by Section 3. In Section 5 is Nose Hill.—*M. Aldous*, 1881.

Sub-division.—All open prairie, heavily-rolling and hilly, particularly so in the south-west portion. Nose Hill attains considerable altitude above Bow River. There are some parts, however, suitable for cultivation—about 40 per cent. of the township—and the soil is of the richest quality throughout. The two branches of Nose Creek join in Section 14. This stream furnishes an abundant supply of excellent water. The grass is very luxuriant, and wild pea was found in many places. The township is admirably suited for grazing, the hills and coulées affording the best of shelter for stock.—*S. L. Brabazon*, 1884.

- 26** *Outlines*.—West. High-rolling prairie. Nose Creek, bordering a marsh, crosses Section 6. No wood, except some scrub in the south half of Section 19.—*T. R. Hewson*, 1883.

East, open, rolling and undulating prairie, with a light and gravelly soil. Class 2. A branch of Nose Creek winds along this line, and crosses several times in Sections 1, 25 and 36.—*M. Aldous*, 1880.

Sub-division.—All heavily-rolling and hilly prairie, with a soil of superior quality, but probably not more than 60 per cent. of it could be cultivated advantageously. There are numerous creek beds, where there is no doubt water during the greater part of the season, and Nose Creek follows the eastern boundary, the south branch of it crossing the south-west corner of Section 6. There are very few hay marshes, but the grass is rich and luxuriant. The township would make an excellent run for cattle.—*S. L. Brabazon*, 1884.

- 27** *Outlines*.—West, open, rolling prairie. First class land. Creeks cross the line in Sections 6, 18, 19 and 31. Section 6 is scrubby. Marshes were crossed in Sections 6 and 30.—*T. Fawcett*, 1884.

East, undulating prairie, with a poor soil, being stony and gravelly in places. Class 2. A watercourse, with high banks, crosses in Section 24. No wood or surface water.—*M. Aldous*, 1880.

Sub-division.—Rolling and undulating prairie. Sections 33 and 34 are broken by a deep ravine, containing a creek, 9 inches deep and 2 feet wide, with good water and a slow current. This creek flows south along the eastern side of the township.

There are many small ravines, running generally in an easterly direction. The trail from Calgary to Edmonton passes along the banks of the creek. The soil is a black loam, with clay subsoil, and rates classes 1 and 2. No wood.—*L. Gosselin*, 1884.

- 28. Outlines.**—North, undulating prairie, with thick willows. Numerous dry creek beds were crossed, and in Section 34 the Calgary and Edmonton cart trail. Line crosses marshes in Sections 33 and 34. West, open, rolling prairie, suitable for all purposes of farming. Line crosses creeks in Sections 6, 19 and 31.—*T. Fawcett*, 1884.

East, open, undulating prairie, with a good soil. Class 1, except Sections 1 and 12, which are light and gravelly, and rated class 2. A rivulet, with banks 40 feet high, was intersected in 36.—*M. Aldous*, 1880.

Sub-divison.—Rolling and undulating prairie. It is all well watered by creeks and sloughs. Sections 4, 5 and 6 are broken by a deep ravine, containing a creek, about 9 inches deep and 2 feet wide, with good water. The current is not very swift. The trail from Calgary to Edmonton passes through this township. The soil is a black loam on a clay subsoil, and rates class 1.—*L. Gosselin*, 1884.

- 29. Outlines.**—West, open, rolling prairie. Water scarce.—*L. R. Ord*, 1884.

East, level and rolling prairie, with a good soil. Class 1. Tributaries of Rosebud River, with banks 70 and 80 feet high, were intersected in Sections 25 and 36; also a watercourse in 1. No wood.—*M. Aldous*, 1880.

South, undulating prairie, with thick willows. Numerous dry creek beds were crossed, and several marshes.—*T. Fawcett*, 1883.

- 30. Outlines.**—West, open, rolling prairie. A small creek flowing to the Rosebud River crosses Sections 7 and 18.—*L. R. Ord*, 1884.

East, open, rolling prairie, with a good soil; somewhat dry, but class 1. A large coulée in Section 36 and a smaller one in 12 contained rivulets. A creek running through a valley about 20 chains wide and 80 feet deep crosses in 24, and a watercourse, with banks 40 feet high, in 12.—*M. Aldous*, 1880.

- 31. Outlines.**—Prairie; brushy and rolling in the north, and open and rolling in the west, with rich soil all around. A marsh in Section 18, and a creek, flowing in a south-easterly direction, in Section 30, and in 32 a cart trail.—*E. Bray*, 1883.

East, open, rolling, level and hilly, with a good soil. Class 1.—*M. Aldous*, 1880.

- 32. Outlines.**—East, open prairie; undulating in north and level in south. Soil, excellent, especially in southern half. Class 1. A bed of a creek, with pools of water in places in Sections 24 and 25. A small creek, with high banks in 13, and Calgary trail in 12.—*M. Aldous*, 1880.

West, gently-rolling prairie, with a rich soil. Line crosses marshes in Sections 6 and 30, and a cart trail in 19.—*E. Bray*, 1883.

- 33. Outlines.**—West, brushy prairie, slightly rolling. Soil rich. The line crosses a creek in Section 6, and marshes in 19 and 30.—*E. Bray*, 1883.

East, rolling and undulating prairie, covered with willow and scattered poplar in Sections 25 and 36. Soil good. Class 1. Small marshes and a trail to Bow River in 25. Calgary trail in 24 and a watercourse in 13.—*M. Aldous*, 1880.

- 34. Outlines.**—West, soil is light and sandy, but good. Woods of willow and spruce. Section 31 is broken by ponds and marshes.—*E. Bray*, 1883.

East, undulating prairie, being rough and broken in Sections 24 and 25, and covered with dry and green poplar and willow scrub. Soil, excellent Class 1.—*M. Aldous*, 1880.

- 35. Outlines.**—East, prairie, rolling in the north and level in the south; comparatively open, with scattered poplar and willow scrub, with a few spruce in 25 and 36. A tributary of Red Deer River, running through a narrow valley, crosses in 13; also a watercourse running north from a small marsh in 12. Soil, good. Class 1.—*M. Aldous*, 1880.

West, undulating, broken and hilly country. Poplar and willows. Soil is first class. Little Red Deer River crosses the line twice in Sections 18 and 30. In 18 a creek, flowing north to join the river, crosses the line twice. Marshes in Sections 6, 7 and 19, and scrubby prairie in 30 and 31.—*T. Kains*, 1883.

- 36. Outlines.**—North, almost covered with a growth of small willows, among which are clumps of poplars. The country is open toward the west side of the range. Soil, rather light, and rated second class. West, undulating country. Soil, First and second class. Spruce, poplar and willow. Red Deer River crosses Sections 6 and 7, flowing east across the south of the township. Medicine River and several smaller streams flow from the west side to the Red Deer. Marshes in Sections 6, 19 and 31. Sections 19, 30 and 31 are scrubby prairie.—*T. Kains*, 1883.

The eastern part of this township is in the valley of the Red Deer River, and has a low, flat surface, with excellent soil. Class 1. The prairie is interspersed with low scrub and scattered willow. Red Deer River, was crossed in Section 1. The river at this point is very deep and rapid, with sand bars covered with willow.—*M. Aldous*, 1880

- 37. Outlines.**—West, Sections 6, 7 and 18 are gently-rising country, almost covered with willows; 19, 30 and 31 are high-rolling country, with poplar and willows. Soil, classes 1 and 2. The south-east appeared almost covered with small willows, among which were clumps of poplar. The country is open toward south-west. Soil, rather light, and rated class 2.—*T. Kains*, 1883.

Sub-division.—The western portion of this township is covered with an extensive growth of good poplar, from 5 to 12 inches in

diameter, suitable for fence rails and building logs, intermingled with clumps of spruce, averaging between 4 and 18 inches in diameter. The eastern portion is largely covered with underbrush and willow, and occasional clumps of poplar. The soil rates classes 1 and 2.—*M. J. Charbonneau*, 1884.

- 38. Outlines.**—West, rolling country. Soil, generally first class. Poplar and spruce, with a few swamps. Two creeks cross the line—one in Section 7, the other in 30, both containing good water.—*T. Kains*, 1883.

East, Sections 13 and 24, and part of 25, are submerged by Swan Lake; the margin, for about 10 chains inland, is a hay marsh. Numerous ponds and hay marshes were crossed in 1 and 12; the remainder is timbered with poplar and willow, intermingled with spruce. Soil, good. Class 1.—*M. Aldous*, 1880.

Sub-division.—The greater portion of this township is covered with a growth of poplar from 3 to 18 inches in diameter, with scattered birch and clumps of spruce, averaging from 4 to 18 inches in diameter, suitable for building timber, &c. The southern portion is mostly covered with underbrush and scattered clumps of poplar. Swan Lake covers a large portion of the eastern side, and Snake Lake parts of Sections 32 and 33. The soil is classes 1 and 2, and is well suited to agriculture.—*M. J. Charbonneau*, 1884.

- 39. Outlines.**—North, undulating; willows and poplar. Blind Man's River crosses the line in Section 35; a tributary crosses in 33 and 34.—*C. A. Magrath*, 1880.

East, level prairie, timbered with poplar and low willows, intermingled with birch in Sections 25 and 36. Soil, excellent. Class 1. Blind Man's River, having fine clear water and rapid current, crosses in 13. Small marshes in 24 and 25.—*M. Aldous*, 1884.

South, this line is all through a timbered country. The poplar grows from 3 to 18 and the spruce from 4 to 18 inches in diameter. Soil, classes 1 and 2. Snake Lake extends over the greater part of Sections 4 and 5.—*M. J. Charbonneau*, 1884.

- 40. Outlines.**—North, poplar and willow. Blind Man's River crosses the line in Section 32, flowing south. Gull Lake almost entirely submerges Section 36, and extends about eight miles northwards.

West, undulating. Clumps of willows and small poplar. Line crosses creeks in Sections 6, 7 and 18, and in the south half of 18 the Rocky Mountain House trail.—*C. A. Magrath*, 1883.

East, open prairie, with patches of poplar and willow. Excellent soil. Class 1. Section 36 and part of 25 are submerged by Gull Lake. Sections 1 and 12 are broken by small ponds, lakes and marshes. An old cart trail to Rocky Mountain House crosses in 24.—*M. Aldous*, 1880.

- 41. Outlines.**—The east of this township is entirely submerged by Gull Lake.—*M. Aldous*, 1880.

- 42. Outlines.**—East, prairie, rough and broken in Sections 13 and 24; covered with scattered poplar and scrub, interspersed with spruce,

in 25. Muskegs in 25. The greater part of 1 is submerged by Gull Lake.—*M. Aldous*, 1880.

East, thick poplar bush, intermingled with some spruce. Soil, sandy loam, 6 to 9 inches deep, on a clay subsoil. Class 3. Section 1 is in Gull Lake.—*J. J. McArthur*, 1882-83.

- 43. Outlines.**—East, country covered with tamarac, and willow swamps and spruce, poplar and scrub intervening. There are open glades and prairie in Sections 24 and 25. An arm of a lake, and a muskeg 30 chains wide, in 13; also small creeks in 1 and 13. Soil, good. Class 1.—*M. Aldous*, 1880.

East, poplar, spruce, willow swamps, burnt poplar and tamarac. Soil, sandy loam, 6 to 9 inches deep, on a clay subsoil. The land rates class 3.—*J. J. McArthur*, 1882-83.

- 44. Outlines.**—North, rolling country, densely wooded with poplar and birch along the middle and toward the western portion of the line. Sections 31, 32 and 36 are partially overgrown with small poplar. In the western half of the first-named section is a spruce muskeg about a quarter of a mile wide. Two creeks, flowing north, are crossed on the western half of 35 and the eastern portion of 36, respectively. The land rates class 3, the soil being 4 inches of sandy loam on a clay subsoil.—*J. J. McArthur*, 1884.

East, country heavily timbered in southern sections, the northern part having been overrun by fire. Soil good. Class 1. A small creek and slough in 13. The snow peaks of the Rocky Mountains visible from Section 1; direction, west south-west.—*M. Aldous*, 1880.

East, poplar, brulé, willows, willow swamps and tamarac swamps. On Section 13 is a creek flowing east. Alluvial soil, sandy loam; depth, 6 inches; subsoil, clay. Class 3.—*J. J. McArthur*, 1882-83.

- 45. Outlines.**—East, rolling country with numerous spruce, willow and tamarac swamps, and scattered poplar and pine bluffs. Soil, light and sandy. Battle River in Section 24, and small creeks in 1, 13, 24 and 36, were intersected. Section 13 is broken by ponds and a small lake, and 1 by small muskegs.—*M. Aldous*, 1880.

The first one and a-half miles of the eastern boundary, going north, is covered with brulé, and about midway on this interval is a creek flowing east. North of this, Section 13 is largely occupied by a lake, surrounded by swamps. In Section 24 is the Battle River and one of its tributaries. The former stream flows east, and the latter south-west. In the north part of this Section is another creek, flowing east along the edge of a spruce swamp. From thence northward the land is high, undulating, and covered with a thick growth of young poplar. Some birch and pine was found on Section 36. Alluvial soil, 6 inches of sandy loam; subsoil, clay. Class 3.—*J. J. McArthur*, 1882-83.

- 46. Outlines.**—East, the northern half is submerged by Pigeon Lake, which abounds in whitefish. The southern half is timbered with a thick forest of tamarac, poplar, willow, and a few spruce. A small creek crosses in Section 12.—*M. Aldous*, 1880.

Sections 1, 12, and about one-third of 13, consist of high, undulating country, densely wooded with poplar and spruce. Soil, 6 inches of sandy loam over clay. Class 3. The balance of the line is in Pigeon Lake. On the south shore of this lake there is some birch among the poplar and spruce.—*J. J. McArthur*, 1882-83.

47. *Outlines*.—East, the southern half is submerged by Pigeon Lake, the northern half being heavily timbered with poplar, willow, birch, spruce and tamarac, the poplar being from 1 to 2 feet in diameter. A pack trail from Peace Hills to Pigeon Lake crosses in Section 25.—*M. Aldous*, 1880.

Pigeon Lake extends northward on the east boundary for nearly two and one-third miles from the southern extremity. The balance of the third mile consists of low land, timbered with heavy spruce. From thence the country is generally high and undulating, and densely wooded with poplar, birch and spruce. In the north of Section 24 is a creek flowing east. Alluvial soil, 6 inches of sandy loam; subsoil, clay. Class 3.—*J. J. McArthur*, 1882-83.

48. *Outlines*.—North, bush all along this line. Creeks, flowing north, cross the line in Sections 32, 33 and 34, and marshes in Nos. 32, 34 and 35.—*J. J. McArthur*, 1884.

The first mile of the eastern boundary, going north, is wooded with poplar, birch and spruce. The second is covered with willow, intermingled with a few poplars and spruces, and near the middle is a small creek. The third is timbered with spruce and poplar; the fourth with tamarac and spruce, part being swampy; the fifth by heavy poplar, a few spruce and some willows; and the sixth with poplar. On the latter are two willow swamps. The land rates class 3, the soil being a sandy loam, 6 inches deep, on a clay subsoil.—*J. J. McArthur*, 1882-83.

49. *Outlines*.—West, with the exception of Section 30 and the north half of 19, heavily timbered. North of 19, and part of the south of 30 is scrubby, a creek crossing the line several times. Remainder of 30 is a large muskeg. Section 31 is broken by a creek and its valley, which cross the line three times; and a branch which crosses once.—*J. J. McArthur*, 1884.

The eastern boundary is covered with poplar bush, with willow swamps occurring at intervals toward the south. A creek was crossed in Section 36 and another in 25. The land rates class 3, the soil being 4 to 6 inches of sandy loam over clay.—*J. J. McArthur*, 1882-83.

50. *Outlines*.—West, parts of Sections 7, 18 and 19 are muskegs; remaining portions of the line lie in a bush country. Sections 30 and 31 are broken by the North Saskatchewan River and valley.—*J. J. McArthur*, 1884.

East, in Sections 1 and 12, a valley and a winding creek, with a northerly course. In 12 and 13, tamarac and alder swamps; then the North Saskatchewan River and valley, swampy on the north side. All the aforesaid country is more or less densely wooded with poplar, but north of this is more scattered.

Soil, 4 to 6 inches of sandy loam, generally class 3.—*J. J. McArthur*, 1882-83.

- 51** *Outlines*.—West, spruce, with thick poplar. Broken by marshes and clear-water ponds. In Section 19 a small stream crosses the line twice.—*J. J. McArthur*, 1883.

The country along the east boundary is wooded, generally with poplar, but belts of spruce occur at intervals, usually on the borders of swamps. The greater portion of Section 36 is covered by a large lake. The soil consists of sandy loam, 6 inches in depth, over clay, and the land is rated class 3.—*J. J. McArthur*, 1882.

- 52** *Outlines*.—North, rolling and level country. Poplar, spruce, tamarac and willow. Section 36 is almost entirely covered by a large marsh.—*T. Kains*, 1882-83.

West, high and broken, overgrown with young poplar. Line crosses several ponds and marshes, and in Section 6 a little brûlé.—*J. J. McArthur*, 1883.

The country along the east boundary is undulating in the north and rolling in the south. It is generally overgrown with willow or poplar scrub, through which are scattered poplar trees. In the north of Section 1 is some thick spruce, bordering on a large lake, a portion of which extends into the south-east corner of this township. Alluvial soil, 6 inches of sandy loam; subsoil, clay. Class 3.—*J. J. McArthur*, 1882-83.

- 53** *Outlines*.—West, broken with poplar and scrub. Line crosses a large pond in Section 19, and an extensive marsh and creek in 30. Soil, sandy loam.—*J. J. McArthur*, 1883.

East, prairie, much broken in northern half by hills, ponds and marshes, covered with poplar, tamarac and spruce, intermingled with small patches of scrubby prairie. Soil, a sandy loam, overlaying a clay subsoil. Classes 1 to 4. Numerous tributaries of Dog Creek were intersected along this line.—*W. Ogilvie*, 1882.

- 54** *Outlines*.—West, undulating, with sandy loam soil, overgrown with willows and poplar. In Section 6 line crosses two creeks; in 19 an extensive marsh, and in the south half of 31 a small marsh and the trail to Lac Ste. Anne.—*J. J. McArthur*, 1883.

East, rolling in northern half, but much broken in south by hills, ponds and marshes; heavily timbered with poplar, with spruce in places. A small creek, running through a deep ravine in Section 13, and another traversing a marsh in 36, were intersected.—*W. Ogilvie*, 1882.

- 55** *Outlines*.—East, country with a rolling surface, except Section 36, which is rough and broken. Timbered with heavy poplar and willow, also some spruce, interspersed with small patches of prairie. A cart trail from St. Albert to St. Anne and Sturgeon River in 6; small marshes in 25 and 1, and also a small lake in 13, were intersected. Soil, classes 2 and 3.—*W. Ogilvie*, 1882.

- 56** *Outlines*.—East, rolling prairie, with the exception of Section 36, which has a broken surface; timbered with heavy poplar, spruce

and willow. Parts of 24 and 25 are submerged by Dead Man's Lake. A small creek, 12 links wide and $1\frac{1}{2}$ feet deep, emptying into Dead Man's Lake, was crossed in 24, also other small creeks of fresh water in 12 and 13. Soil, classes 2 and 3.—*W. Ogilvie*, 1882.

. *Outlines*.—East, rolling and level prairie, timbered with poplar willow and spruce, and burned slash, having groves of green poplar and spruce in Sections 1, 12 and 25. Section 36 is muskeg, with scattered spruce and tamarac. A small creek in 1 and a marsh in 13. Soil, class 2.—*W. Ogilvie*, 1882.

TOWNSHIPS WEST OF FIFTH INITIAL MERIDIAN.

RANGE II.

6. *Outlines.*—South of the South Fork of Old Man's River is very broken and wet, and all covered with willow scrub. The northern portion is rough and broken, and the soil gravelly. What little good land there is in it is occupied. There is some good spruce timber, cottonwood and poplar, on the north-west portion of the township.—*F. W. Armstrong*, 1883.
7. *Outlines.*—Eastwards, the surface is undulating, with a rich black loam on a clay subsoil. In Section 36 the line crosses the Middle Fork of Old Man's River, which has a rapid current, and is 2 feet deep. The south side of river is lined with spruce and balsam, and the valley is generally covered with willow brush and some good poplar.—*C. E. Wolff*, 1882-83.
8. *Outlines.*—East, undulating country. The soil is a sandy loam on a clay subsoil.—*C. E. Wolff*, 1882-83.
9. *Outlines.*—The eastern side has an undulating surface and a clay soil.—*C. E. Wolff*, 1882-83.
10. *Outlines.*—East, undulating. Soil, clay. The line crosses the North Fork of Old Man's River in the north half of Section 1. There is some good limestone along the north bank. In Sections 12 and 13 the line crosses a creek in several places, which empties into the river.—*C. E. Wolff*, 1882-83.
11. *Outlines.*—The east line is crossed by a number of deep ravines. Between the second and third miles, from the northern boundary, this line is crossed eight or nine times by a creek, about 20 links in width, which is a tributary of the North Fork of Old Man's River. There are many small creeks running out of the numerous ravines into it. The country is well adapted for grazing.—*T. R. Hewson*, 1883.
12. *Outlines.*—The north boundary crosses numerous sandstone ridges, averaging about 1,000 feet in height. In the valleys between these ridges there is considerable spruce and fir timber, suitable for building, fencing and fuel. The soil, in general, is a rich clay loam, averaging about 15 inches in depth, upon a sandstone or gravel formation. There are numerous small mountain streams, which are tributaries of Trout Creek. The grass in the valleys between the ridges is very luxuriant, and the country is well adapted for grazing. The east boundary runs along the edge of the western ridge of the Porcupine Hills for about four miles southwards, from thence gradually descending into the wide valley between the hills and the Rocky Mountains, where it crosses a number of small creeks. There is considerable timber at intervals along the line.—*T. R. Hewson*, 1883.

13. Outlines.—The east boundary runs along the western edge of the Porcupine Hills, crossing a number of high sandstone ridges, and a very broken country generally. The valley of Willow Creek lies in Sections 25 and 36, and in it is the South Fork of the creek. The timber is very scarce and small, being suitable only for fencing and fuel.—*T. R. Hewson*, 1883.

14. Outlines.—The east of this township lies over the western ridge of the Porcupine Hills, and is very rough and broken. A branch of Willow Creek crosses about four miles from the south. There is scarcely any timber along this line, and what there is is suitable only for fencing and fuel.—*T. R. Hewson*, 1883.

17. Outlines.—West, rough and hilly. Good soil in valleys. Line crosses creeks in Sections 6, 7 and 19, and the south branch of High River in 7. Timber was found in the vicinity of the river.—*M. Aldous*, 1881.

East, hilly. High River, the only water on this line, was crossed in Section 36. The country is high and hilly. On the hill sides and valleys, is a luxuriant growth of grasses, but the hill tops are generally barren.—*J. A. Kirk*, 1883.

Sub-division.—The soil is a clay loam on a clay subsoil, and generally rates class 2. There is considerable cottonwood timber along the south branch of High River. This branch enters the township on Section 7, and flowing north-east, joins the main stream in Section 25. The main stream enters by Section 3 and leaves by 36. The North-West Cattle Company have ranche buildings on the north-west quarter of Section 8, and a large number of cattle feed on the plains.—*R. C. McPhillips*, 1883.

18. Outlines.—West, rough and hilly. Soil is good on the slopes, and the vegetation is rich. The line crosses two creeks in Section 5, one in 18, one in 19, and High River in 30.—*M. Aldous*, 1881.

East, surface heavily-rolling. A branch of High River crosses the line in Section 1.—*J. A. Kirk*, 1883.

Sub-division.—This township is watered by the north branch of High River. In Sections 3 and 4 the surface is very stony. The soil in the greater portion of the township may be generally described as a clay loam, 8 or 10 inches deep, on a clay subsoil, but along the river it is sandy loam, and on the hills, in the northern part of the township it is gravelly. Several spring creeks flow to the river.—*R. C. McPhillips*, 1883.

19. Outlines.—West, rolling and hilly country. Soil, rich black loam at the south, but becomes sandy towards the north. Vegetation rich. Tongue Creek was crossed in Section 7, and others in 18, 19 and 30. Nos. 18 and 19 are scrubby. Small marshes in 6 and 31.—*M. Aldous*, 1881.

East, rolling; good grazing land. Soil, second class. Line crosses Tongue Creek and two marshes in Section 13, and another marsh in 36.—*L. Kennedy*, 1881.

Sub-division.—Rolling prairie, but the hills and valleys are on a very large scale. The soil is a clay loam, of about 10 inches

depth, with a clay subsoil. Two branches of the Tongue Creek cross the township. The water in these streams is pure and good.—*R. C. McPhillips*, 1883.

- 20.** *Outlines.*—West, rolling towards the north and south; very hilly in the centre. Creeks in Sections 6, 19 and 31, and in 6 Sheep Creek, Section 31 is wooded with poplar and willow. Scrub only in Nos. 7, 18, 19 and 30.—*M. Aldous*, 1881.

East, rolling land; good grazing. Soil, classes 1 and 2. Sheep Creek, in two branches, crosses the line in Section 25. Scattered poplar and brush in the vicinity of the creek.—*L. Kennedy*, 1881.

Sub-division.—Principally rolling prairie. Two branches of Sheep Creek run through this township. The soil along these streams is sandy loam, but in the rest of the township clay loam, with clay subsoil.—*R. C. McPhillips*, 1883.

- 21.** *Outlines.*—West and south, the country is rolling in the south west, but becomes hilly in the north-west and south-east. Sheep Creek crosses the south-west from Section 7 to 4, and there are very small tributaries to it crossing 18, 19 and 31. There is low scattered scrub all along the west line.—*M. Aldous*, 1881.

East, rolling and hilly. Soil, first class. Good grazing. Scrub, cottonwood and willows found all along the line. A creek, flowing east, crosses the line in Section 13.—*L. Kennedy*, 1881.

Sub-division.—This township is not very desirable for settlement, on account of the surface being very hilly and stony. The summit of the highest ridge is about 500 feet above the surrounding valleys. One of these valleys occupies the western and part of the southern portion of the township. It is wide, very level, and has a soil composed of black sand, with a gravelly subsoil. It presents a fine prospect, being at the foot of the Rocky Mountains, and traversed by Sheep Creek, which is a stream of good water, 70 feet wide, and about $1\frac{1}{2}$ feet deep in low water time, having a large quantity of timber on its banks. Clumps and ridges of poplar and other kinds of wood are very numerous in many parts of this township.—*C. E. LaRue*, 1883.

- 22.** *Outlines.*—West, hilly country, with a rich black loam soil. Creeks cross the line in Sections 19 and 30. Patches of thick willows and thick scrub all along the line.—*M. Aldous*, 1881.

East, rolling land. Soil, first class. Good grazing. Scrubby in places.—*L. Kennedy*, 1881.

Sub-division.—The surface is generally very hilly and broken prairie, with a wide rolling valley in the northern part. There is a sufficient quality of poplar timber for the requirements of settlers for building, fencing and fuel, most of which is in the south-west portion. The remaining portions of the township are covered with a great quantity of brush. A good supply of water in several creeks, of which the principal is Pine Creek, with its tributaries, in the south. This stream traverses a narrow valley, which expands somewhat towards the south-east. In Sections 13 and 14 is a lake of considerable size, but the water is unfit for drinking. There are a few hay marshes in the north-eastern part of the

township. The soil in the northern portion and in the Pine Creek valley is black loam and sand, very suitable for farming. The settlement of the Pine Creek valley seems to be progressing very well.—*C. E. LaRue*, 1883.

- 24.** *Outlines.*—North, rolling prairie. Soil, sandy in the east and gravelly towards the west. In Section 36 the line crosses the Calgary and Morleyville trail, and in Section 34 the Bow River. Western half is timbered with poplar and spruce, together with willow underbrush and scrub.—*M. Aldous*, 1881.

West and south, rolling prairie. Good soil. Some willows. Creeks in Sections 6, 7 and 18. Elbow River crosses the south-west from Section 7 to 4, in several channels. East, rolling prairie. Good grazing soil, mostly second class. The line crossed trails in Sections 1 and 13, and the Bow River in 24. No wood, but a small quantity of scrub in Section 1.—*L. Kennedy*, 1881.

Sub-division.—A very extensive plateau, over 100 feet above the surrounding land, occupies the central part of the township. It is covered with scattered brush, and is suitable only for grazing, particularly for sheep. The remainder of the country is rolling and flat. The Bow River traverses the north-east, and the Elbow River the south-east corner, both furnishing good fresh water. There is some bush on the islands of the Elbow River, and on its north bank sufficient for the use of settlers during a number of years. The soil is generally sandy and gravelly, and rates class 3. The C.P.R. passes through the valley of the Bow River, which is wide and flat.—*C. E. LaRue*, 1883.

- 25** *Outlines.*—West, rolling country. Line crosses the Bow River and the Canadian Pacific Railway in Section 6, and the Morleyville trail in 30. Sections 30 and 31 are scrubby. East, very hilly. Line crosses Nose Hill and numerous ravines running into Nose Creek. The soil is of first class character, and the growth of grass luxuriant. Can scarcely be surpassed for grazing, and but for the summer frosts it would be excellent agricultural country.—*T. R. Hewson*, 1883.

South, surface rolling, with a sandy loam soil in the east, getting very gravelly towards the west. The Bow River flows east along Sections 3, 4, 5 and 6, and its banks are wooded with poplar and spruce, together with willow underbrush and scrub.—*M. Aldous*, 1881.

Sub-division.—This township is very rough and hilly, not more than one-fourth of it being suitable for cultivation. The north-west quarter is very much cut up by hills and ponds. In Section 28 is a hill that rises about 100 feet above all others, affording an extensive view. The height of land is reached about the middle of the township, and from thence to the bottom lands of the Bow River, which flows quite near the south boundary, from the western outline to the south-east corner of Section 3, it is a continuation of high-rolling hills. The C.P.R. runs along the north shore of the river, until it crosses on Section 3, at which point the banks, on the north side, are high and precipitous. Keith Siding is in Section 5. Along the south side of the river

the banks are, in many places, over 200 feet high, and are covered with bush, chiefly cottonwood and spruce, some of which would answer for building and fencing. An inexhaustable supply of driftwood, suitable for fuel, can easily be obtained. The land in this township is admirably adapted to grazing, as the grass is rich and luxuriant, and would furnish feed for an almost unlimited number of cattle. The hills and coulées also afford excellent shelter.—*S. L. Brabazon, 1884.*

- 26. Outlines.**—Very hilly. Line crosses Nose Hill and numerous ravines running into Nose Creek. On the east boundary of Section 1 the line crosses Nose Creek, which is 22 links in width, boggy banks, gravel bottom, numerous rapids and clear water. The soil is of first class character and the growth of grass luxuriant. The country can scarcely be surpassed for grazing, and but for the reported summer frosts, would be excellent for agriculture.—*T. R. Hewson, 1883.*

Sub-division.—This township is very rough, broken and unfavorable for settlement, but the soil is generally very rich. Nose Creek runs diagonally through the township in a valley of about 350 yards wide, the banks of which are, in many places, rocky and precipitous, but excepting a few limited intervals, they are covered with grass. In the south-west portion are high-rolling hills and gullies. Part of Nose Hill runs across the south-west corner, attaining a very high altitude. The geological formation is very peculiar. The valley of the creek is a sort of trough between very high land on either side, but which falls irregularly for a distance of about two miles toward it. The vegetation is luxuriant, and there is complete shelter for stock.—*S. L. Brabazon, 1884.*

- 27. Outlines.**—West, hilly and rolling. Water abundant in ponds. A small stream in Section 6.—*C. F. Miles, 1883.*

East, open, rolling prairie. First class land. Creeks cross the line in Sections 1, 13, 24 and 36. Section 1 is scrubby. Marshes were crossed in Sections 1 and 25.—*T. Fawcett, 1884.*

Sub-division.—The north-west quarter of this township is rather hilly, and is covered with a light growth of willow scrub. The rest is gently-rolling prairie. The soil is of excellent quality, being a deep black loam, well adapted to agriculture. A deep valley, varying from a quarter to a half a mile in width, runs through the township dividing the following sections, viz., 34, 27, 22, 15, 16, 9, 8, 5 and 6. Its banks are from 80 to 100 feet high, and from their sides many fresh-water springs run into Nose Creek, which flows south-westerly through the valley. This stream is 6 to 13 feet wide and 3 to 4 feet deep, and has a rapid current.—*J. J. Burrows, 1884.*

- 28. Outlines.**—West, rolling prairie, with a rich soil. Line crosses a spring creek in Sections 30 and 31, and a small marsh in 6.—*C. F. Miles, 1883.*

North, undulating prairie, with thick willows, except Section 32, which is scrubby. A small creek crosses the line in this section. East, open, rolling prairie, suitable for all purposes of

farming. Line crosses creeks in Sections 1, 24 and 36.—*T. Fawcett*, 1883-84.

Sub-division.—Rolling prairie, broken by a deep gully running from the north-west to the south-east corners. All along the south bank is small poplar, willow and brush. Some of the poplars were about 6 inches in diameter. There are a couple of small lakes of good water in the gully, from which a creek, about 9 inches deep, runs in a south-easterly direction. Another gully of about 75 feet in depth runs in a north-west direction from Section 3, and contains a long slough. The south-west part of the township is very well watered by deep marshes and ponds of good water. There is also considerable brush in the central west. The soil is a rich black loam, with a clay subsoil. Class 1.—*L. Gosselin*, 1884.

- 29.** *Outlines*.—West, rolling prairie, with a sandy loam soil, 10 to 16 inches in depth, on a clay subsoil. Class 1. Beaver Dam Creek follows the course of this line, immediately west of it, for the first four miles going north, and is joined by a tributary, flowing across the southern portion of Section 19. There is no wood. East, is rolling prairie, and the soil principally black loam, 8 to 12 inches deep, over clay. Class 1. There is, however, an interval of about a mile, the greater portion of which is on Section 25, and the balance on the adjoining part of 24, which is very gravelly. There is no wood or water.—*L. R. Ord*, 1884.
- 30.** *Outlines*.—West, rolling prairie, with a soil of black loam, 10 to 12 inches in depth, on a clay subsoil. Class 1. In Section 6 is a creek, flowing west. East, rolling prairie. Soil, generally sandy loam or black loam, 4 to 12 inches in depth, on a subsoil of clay or gravel. Classes 1 and 2. Water is scarce, and there is no wood.—*L. R. Ord*, 1884.
- 31.** *Outlines*.—Rolling prairie, with rich soil; there is, however, not much surface water.—*E. Bray*, 1883.
- 32.** *Outlines*.—West and east, gently-rolling prairie, with a rich soil. There are a few marshes in the township, and a cart trail, from Morleyville to the north. On the west there is brushy land, with poplar bluffs.—*E. Bray*, 1883.
- 33.** *Outlines*.—In the west there are woods of poplar and willows, and a good soil. In the east it is brushy prairie, slightly rolling, with a rich soil. The line crosses a creek in Section 1 and marshes in 24 and 25.—*E. Bray*, 1883.
- 34.** *Outlines*.—The country along the west boundary is principally rolling and covered with willow and small poplar. The Little Red Deer River pursues a winding course eastward through a wide valley on Section 18, and across the line there flows, at various places, tributaries to it. In this valley, and also on Section 19, there is considerable poplar and spruce bush. The soil is black loam, 6 to 10 inches deep, on a clay subsoil. The land rates as follows: Section 7 and the northern half of 31, class 1, and the rest class 2.—*L. R. Ord*, 1884.

East, soil is light and sandy, but good. Woods of willow and spruce. Section 36 contains a number of ponds and marshes.—*E. Bray, 1883.*

- 35. Outlines.**—This township, both west and east, is an undulating country with poplars and willows, and a first class soil. The Red Deer River crosses the north-west part of the township, and is entered by a number of creeks. Little Red Deer River crosses the east line twice in Sections 13 and 25. In 13 a creek, flowing north to join the river, crosses the line twice. Marshes are abundant throughout.—*T. Kains, 1883.*
- 36. Outlines.**—North, Medicine Creek crosses the township, diagonally, entering between Sections 34 and 35, and leaving by 24; it has a stony bottom, swift current, and is one chain wide. Willow predominates in this section of the country. Poplar was found in clumps toward the north-west. Soil, second and third class. In the east, the surface is undulating, and the soil first and second classes Spruce, poplar and willows. Red Deer River, in Sections 1 and 12, and smaller streams in 12 and 25. Marshes in Sections 1, 24 and 36. In the west, is a slightly undulating country, nearly covered with willows. Soil, class 1. Marshes were crossed in every section, and creeks in Sections 6, 30 and 31, all good water.—*T. Kains, 1883.*
- 37. Outlines.**—The west is an undulating to rolling country, with a light growth of willow scrub. Soil, classes 1 and 2. Water, abundant, in numerous marshes. Creeks in Sections 7, 30 and 31, good water. Medicine Creek, which runs southwards across the township, leaves between Sections 2 and 3, has a swift current and is about 60 feet wide. Willow predominates in the south-east, but there is some poplar toward the south-west. The soil is second and third class in the south, and in the east it is first and second. Sections 1, 12 and 13 are almost covered with willows; 24, 25 and 36 are high rolling country, with poplar and willows.—*T. Kains, 1883.*
- East, prairie heavily timbered with poplar, willow, tamarac, birch and spruce, except Section 1 which is comparatively open. Soil, excellent in south, but is somewhat swampy in north. Small marshes in 12, and a creek in 1 were crossed.—*M. Aldous, 1880.*
- 38. Outlines.**—West and east, undulating country, covered with a light growth of willow scrub, and the soil generally first class. Poplar and spruce, with a few swamps on the east side of the township. A number of creeks cross both lines, all containing good water.—*T. Kains, 1883.*
- 40. Outlines.**—North and east, undulating. Clumps of willows and small poplar. Line crosses creeks in Sections 1, 12 and 13, and in the south half of 13 the Rocky Mountain House trail.—*C. A. Magrath, 1883.*
- 44. Outlines.**—Along the north boundary, going east, the first $3\frac{1}{2}$ miles is mainly covered with brulé, intermingled by occasional bluffs of small pine and two belts of pine, averaging about 8 inches in

diameter. Through Section 34, which consists of marsh land, Blind Man's River flows south. The western part of Section 35 is a dry tamarac muskeg, and the central portion, prairie. From thence, to the end of the line, the country is high-rolling and covered with small poplar and willows. The land generally rates class 3, the soil being sandy loam over clay.—*J. J. McArthur*, 1884.

49. *Outlines.*—West, scrub and numerous muskegs. Creeks in Sections 6, 7, 18 and 19. The east is heavily wooded, with the exception of Section 25, and the north half of 24, which are scrubby. In 25 is a large muskeg. In Section 36 is a creek and its valley, which cross the line three times, and a branch which crosses once. The south has poplar all along the line. Creeks, flowing north, cross Sections 4 and 5.—*J. J. McArthur*, 1884.

50. *Outlines.*—East, parts of Sections 12, 13 and 24 are muskegs; remaining portion of the line lies in a bush country. Sections 25 and 36 are broken by the North Saskatchewan River and valley. In south half of 25, a creek, flowing towards the river, crosses the line.—*J. J. McArthur*, 1884.

51. *Outlines.*—East, spruce and thick poplar. Many marshes and clear water ponds. In Section 24 a small stream crosses the line twice.—*J. J. McArthur*, 1883.

52. *Outlines.*—North, hilly and rolling country. Poplar, spruce and tamarac. Large lake submerges the greater part of Section 34. Line crosses extensive lakes in almost every section.—*T. Kains*, 1882-83.

West, high, open and rolling in south of Section 6. Greater part of 7 and 18 broken by a lake. A large lake submerges all the south half of 31, and about half of the north of 30. Bush in 6, 19 and 30. Trail in 1, and muskeg in 36. The alluvial soil, where any exists, is sandy loam over clay. East, high and broken; overgrown with young poplar. Line crosses several ponds and marshes.—*J. J. McArthur*, 1883.

TOWNSHIPS WEST OF FIFTH INITIAL MERIDIAN.

RANGE III.

- 17. Outlines.**—West and south, rolling or hilly prairie. Bluffs of poplar and scattered pine, willow and spruce, soil, a gravelly clay and clay loam, much of it, rich and class 1. In Sections 6 and 7 creek beds cross the line. Line crosses creek in Section 1, two in 2, four in 3, one in 7, and one in 6. Some meadow land in Sections 2 and 3.—*T. Fawcett*, 1883.

East, rough and hilly. Good soil in valleys. Line crosses creeks in Sections 1, 12 and 24, and the south branch of High River in the south half of 12. Wood in the vicinity of the river.—*M. Aldous*, 1881.

- 18 Outlines.**—West, thickly covered with the usual kinds of western timber and scrub. Soil, clay loam. Classes 1 and 2. The North Branch of the High River enters and crosses the south-west corner, flowing north-east across the township.—*T. Fawcett*, 1883.

East, rough and hilly. Soil is good on the slopes, and the vegetation is rich. The line crosses two creeks in Section 1, one in 13, one in 24, and the High River in 25. Scrub in 24 and 36.—*M. Aldous*, 1881.

- 19. Outlines.**—West, thickly covered with willow and poplar scrub, and scattered poplar, pine and spruce; some of it burnt. Soil, generally, clay loam, and class 1. Good land and fine spring creek water.—*T. Fawcett*, 1883.

East, rolling and hilly country. Soil, rich black loam at the south, but becomes sandy towards the north. Vegetation rich. Tongue Creek was crossed in Section 12, and others in 13, 24 and 25.—*M. Aldous*, 1881.

- 20. Outlines.**—North and west hilly and heavily rolling. Poplar, spruce and willows scattered in places. Creeks were crossed in Sections 34 and 33. The north branch of Sheep Creek crosses around Section 31, and small tributaries almost every half mile of the west boundary.—*T. Fawcett*, 1883.

East, Rolling toward the north and south; very hilly in centre. Creeks cross the line in Sections 1, 24 and 36, and, in the south half of 1, Sheep Creek is crossed. Section 36 is wooded with poplar and willow, but only scrub on the balance of the line.—*M. Aldous*, 1881.

- 21. Outlines.**—West, rolling and highly-rolling prairie, covered with spruce, poplar and willows. Soil, clay loam. Classes 1 and 2. The creeks are fresh water, and a few marshes were met with.—*T. Fawcett*, 1883.

East, rolling country, becoming very hilly at the north. Soil, rich black loam. Two creeks were crossed in Section 12, the most northerly one being Sheep Creek. This creek crosses the south of

the township, and has a number of small branches along the east. —*M. Aldous*, 1881.

Sub-division.—The surface of this township, is mainly a succession of hills and valleys, the hills being generally from half a mile to a mile wide, and from 200 to 400 feet high, their northern or north-eastern slope wooded chiefly with small poplar. In the north-western part, the timber is principally spruce, about 9 inches in diameter. The southern and south-western slope of the hills is generally prairie. At the foot of the hills there is usually a growth of willow brush. The eastern third of the township is principally rolling prairie. Over the whole township there are scattered shallow marshes and ponds of fresh water, and and in the principal valleys, creeks of pure water, which are fed by numerous smaller creeks and springs, the whole of which drain into the north branch of Sheep Creek, a stream 60 to 100 feet wide, and about 2 feet deep, with gravelly bottom and very rapid current, flowing through the southern part of the township. The soil is a rich black loam, with a clay subsoil. There is a most luxuriant growth of grass and vetches. The whole township is exceedingly well adapted for grazing. The land, though rich, is too moist for grain growing.—*G. Ross*, 1884.

- 22.** *Outlines.*—West, thickly covered with willow, poplar, spruce and pine. Soil, clay and clay gravelly loam, highly rolling and uneven. Fish Creek crosses the township and leaves by Section 7, is about 30 to 40 links wide, and has a current of about 4 miles an hour.—*T. Fawcett*, 1883.

East, hilly country, with a rich black loam soil. Section 1 is very hilly. Creeks cross the line in Sections 1, 24 and 25. Thick willows and scrub all along.—*M. Aldous*, 1881.

Sub-division.—In this township there are numerous hills and valleys chiefly west of Fish Creek. The central part is occupied by the wide valley of this creek which is principally rolling prairie. Clumps of poplar and spruce, the trees being from 4 to 12 inches in diameter, are scattered through the township on the eastern and northern slopes of the hills. A considerable area is overgrown with scrub. Fish Creek, with its north fork, meanders through the township in an easterly and northerly direction. This stream is 30 feet wide and 2 feet deep, with very rapid current, stony bottom and good water, and the whole township is well watered by numerous small creeks which drain into it. The soil is a rich black loam on a clay subsoil. On the tops of some of the hills, is an out-crop of sandstone rock. The growth of grass and vetches is luxuriant. The soil, though rich, is too springy and moist for grain-growing, but the whole township is admirably adapted for grazing.—*G. Ross*, 1884.

- 24.** *Outlines.*—North, gently undulating or rolling prairie. Soil, sandy and good. Scrub in 36 and 31. Creek in 36 and a marsh in 33 —*M. Aldous*, 1881.

West and east, rolling and hilly land. Soil, mostly class 2, Some willows and scrub. From Section 18 the Elbow River, crosses the township to Section 12. North of the river two trails

cross the line, and on both north and south, there are small tributaries to the river.—*L. Kennedy*, 1881.

Sub-division.—The surface is hilly and rolling. On each bank of the Elbow River, which traverses the middle portions of this township, is a belt of poplar and spruce, averaging from 6 to 10 inches in diameter, suitable for fuel, buildings and fences. The soil consists of black loam, 8 inches deep, on a subsoil of clay, sand or gravel, and rates classes 1, 2 and 3.—*C. E. LaRue*, 1883.

- 25. Outlines.**—West, rolling country. Line crosses Bow River and the C.P.R. in Section 30. Scrub in Sections 6 and 19, and in the vicinity of the river. East, rolling country. Line crosses the Bow River and the C.P.R. in Section 1, and the Morleyville trail in 25. There are numerous sloughs and many clumps of poplar. The soil is of first class character, and the growth of grass luxuriant. The country can scarcely be surpassed for grazing.—*T. R. Hewson*, 1883.

Sub-division.—Bow River flows in an easterly and south-easterly direction, through this township, in a valley about 250 feet deep. The banks are generally clay, but are, in places, rocky and abrupt, and frequently broken by deep coulées. Along the southern bank there is usually a fringe of cottonwood or poplar, and, where the bank is steep, of spruce. The flats along the river are well adapted for pasture lands, and in several of the coulées there are good springs of pure water. The north-eastern and south-eastern parts of the township consist of rolling prairie, with a black loam soil, on a clay subsoil, and are first class agricultural lands. Portions of Sections 7, 8 and 18 are covered by a large deep marsh, the southern part of which is valuable as hay land. The C.P.R. passes through this township in the valley of the Bow River, and along its north bank.—*G. Ross*, 1884.

- 26. Outlines.**—West, rolling country. A trail in Section 6, and Big Hill Creek in 18. Most of the line is scrubby. The east has a first class soil, and numerous sloughs and clumps of poplar. Can scarcely be surpassed for grazing.—*T. R. Hewson*, 1883.

Sub-division.—This township is particularly well adapted to grazing, being in general too rough and hilly for agriculture. There are a few hay marshes and ponds. In some places there is a heavy growth of short, thick brush. Big Hill Creek crosses the north-west of the township in a deep coulée, about 250 yards wide, with a marshy bottom. The banks are about 250 feet high, but generally covered with vegetation, which throughout the township is remarkable for its richness, several varieties of pea vine being in great abundance. There is a considerable quantity of good firewood along the banks of the coulée, consisting chiefly of poplar and spruce.—*S. L. Brabazon*, 1884.

- 27. Outlines.**—The west is rolling prairie, very little water along the line. The east is hilly and rolling, with water abundant in ponds. Fine grazing.—*C. F. Miles*, 1883.

Sub-division.—The greater portion of this township is heavily rolling country, mostly covered with willow scrub and very much broken by many small hills, among which are numerous ponds.

On Sections 23 and 26 is a lake, the water of which, as in most of the ponds, is of good quality. A deep valley, about a quarter of a mile in width, and having banks about 100 feet high, runs southerly from the north-west corner through the westerly tier of sections. At the bottom of this valley is a stream, flowing south, 3 to 4 feet deep, and from 6 to 15 feet wide, with a current of about 4 miles an hour, called Cochrane Creek. The soil is of average quality, being, generally, a black loam on a clay subsoil. On account of the broken nature of this township it is best suited for grazing purposes.—*J. J. Burrows*, 1884.

- 28. Outlines.**—North, undulating prairie, with burnt and green willows. A creek, 20 links wide, 2 feet deep, and containing good water, was crossed in Section 36. Current, 4 miles an hour. Other streams cross the line in Sections 32, 34 and 35. Morleyville and Edmonton trail crosses in 32.—*T. Fawcett*, 1883.

West, rolling and hilly prairie, dotted with willow scrub. Line crosses creeks in Sections 6, 7 and 31; marshes in 7, 18 and 30, and the trail to Morleyville in 19. East, rolling prairie. Line crosses a spring creek in Sections 25 and 36.—*C. F. Miles*, 1883.

Sub-division.—This township is generally of a heavily-rolling character. The southern portion is rather rough and hilly; while in the north a deep gully—apparently an old river bed—varying from 100 to 200 feet in depth, and having an average width of a quarter of a mile, runs southward from Section 32 to the centre of 21. There are many creeks of good fresh water, the largest of which, Beaver Dam Creek, is about 17 feet in width and 18 inches in depth, with a current of about 3 miles an hour. This creek enters on Section 7, runs diagonally through the township in a north-easterly direction and out at the north-east corner of Section 36; it is fed, in its course, by numerous smaller streams. The eastern half of the township is open prairie, the remainder being covered with a light growth of short willow. There are one or two small bluffs of poplar, but the growth of wood in the township is chiefly confined to willow scrub. The soil is a deep black loam, with a clay subsoil, and well suited to agriculture.—*J. J. Burrows*, 1884.

- 29. Outlines.**—West, rolling prairie, with willow brush. Soil, black loam, 6 to 10 inches deep, on a clay subsoil. Class 1. Dog Pound Creek crosses Section 18. East, rolling prairie. Alluvial soil, sandy loam, 10 to 16 inches in depth; subsoil clay. Class 1. Beaver Dam Creek flows northward through Sections 1, 12, 13 and 24, turning towards the west as it enters 25. No wood.—*L. R. Ord*, 1884.

- 30. Outlines.**—West, rolling prairie, covered with thick willow brush. Alluvial soil, black loam; average depth, 15 inches; subsoil clay. Class 1. Three small creeks were crossed, one in Section 18, and the other two in 19. East, surface, rolling prairie. Alluvial soil, black loam, 10 to 12 inches in depth; subsoil clay. Class 1. In the south of Section 1 is a creek flowing west.—*L. R. Ord*, 1884.

- 31. Outlines.**—Rolling prairie, generally covered with willow brush, but there are several large bluffs of spruce and poplar. Several creeks were crossed and part of a large pond extends into the south part of 6. The alluvial soil is black loam; depth, 12 to 18 inches; subsoil clay. Class 1.—*L. R. Ord*, 1884.
- 32. Outlines.**—West, rolling prairie, with willow brush and poplar bluffs. Alluvial soil; black loam; depth, 6 to 24 inches; subsoil clay.—Class 1. Several small creeks were crossed on Sections 6 and 7.—*L. R. Ord*, 1884.
East, brushy land, with poplar bluffs. Good soil.—*E. Bray*, 1883.
- 36. Outlines.**—North, along the easterly $2\frac{1}{2}$ miles, willows predominate, with scattered poplar. Thick poplar brush, of recent growth and small dimensions is then met with. West, the timber increases in size, mixed with fair-sized spruce. Muskegs of various widths, and extending long distances north and south of the base occur near the west. These muskegs are generally surrounded by a dense growth of poplar, interspersed with clumps of knotty spruce, from 10 to 24 inches diameter, and are so spongy, that it is frequently impossible to walk over them, without falling through the surface. East, gently undulating. First class soil. Many marshes and abundance of willows. There are a number of creeks, and all contain good water.—*T. Kains*, 1883.
- 44. Outlines.**—Of the first three miles of the north boundary going east, about one half is muskeg, and the rest pine and poplar bush. The fourth mile is covered with brulé, and the remaining two miles with brulé, willows and bluffs of small poplar, and one or two small muskegs. Through one of the muskegs, on Section 32, Medicine River flows south. Soil, sandy loam over clay; classes 3 and 4.—*J. J. McArthur*, 1884.
- 49. Outlines.**—Surveyed west, south and east boundaries. Heavily wooded with poplar, spruce pine, birch and tamarac. Creeks cross the line on every mile, and marshes and muskegs are very numerous. The soil consists of a sandy or vegetable loam, 6 to 8 inches deep, on a clay subsoil. The land is rated classes 2, 3 and 4.—*J. J. McArthur*, 1884.
- 50. Sub-division.**—Is on the south side of the North Saskatchewan River with the exception of Section 31, and parts of 29, 30 and 32. The river enters from the west in Sections 30 and 31, flowing west to the centre of 29, where it turns sharply to the north and passes out in Sections 31 and 32. Heavily wooded, over its entire area, with spruce, poplar and cottonwood. Country is rolling and fairly watered by small creeks, the largest of which might possibly be used for driving logs. This creek enters the river in the south-west quarter of Section 29. Soil is clay and clay loam. The river banks on the south side are high and steep, and in Section 29 contain a coal seam of considerable size.—*S. B. Lucas*, 1884-85.

51. Sub-division.—The greater portion is on the north side of the North Saskatchewan River, which enters the township from the south-west quarter of Section 5, flows north, and passes out in Sections 24 and 25. Country is rolling and heavily wooded with large spruce, poplar and cottonwood, and is traversed by many small creeks. Soil is clay and loam. White Whale River, the only one which can be used for floating logs, enters the river from the north (Section 25). The river banks are high and steep and, in many places, perpendicular or cut banks occur. In Section 27 a 4-foot coal seam is exposed (north of the river). In Section 23—south side—there are two seams, $3\frac{1}{2}$ feet each, and in Nos. 25 and 5, 4-foot seams crop out.—*S. B. Lucas*, 1885.

52. Outlines.—North, rolling and level country. Brulé and windfall; spruce and poplar. A creek crosses the line once in Section 36, and seven times in 35. Marshes in 31, 32, 34, 35 and 36, the latter being very large.—*T. Kains*, 1882-83.

West, heavy spruce. Line crosses a trail in Section 7, and the White Whale River in 31. This river drains White Whale Lake, which submerges the greater part of the north half of Section 31. East, high, open and rolling in south of Section 1. Greater part of 12 and 13 broken by a lake. A large lake submerges all the south half of 36, and about half of the north of 25. Bush in 1, 24 and 25. Trail in 1, and muskeg in 36. The alluvial soil, where any exists, is sandy loam over clay.—*J. J. McArthur*, 1884.

TOWNSHIPS WEST OF FIFTH INITIAL MERIDIAN

RANGE IV.

17. Outlines.—South and east, thickly covered with wood of various kinds; willow and poplar scrub, and large and small poplar, spruce and pine. Soil, clay loam and gravelly clay loam. All class 1. Some fine clear spring creeks permeate the township. The North Branch of High River flows north-east across the township, from Sections 6 to 25 and 36. It has a width of 70 feet, a 5 mile current, clear water and stony bed.—*T. Fawcett*, 1883.

20. Outlines.—North and east, very rolling and uneven surface. Soil, various grades of black clay and sandy loams. Classes 1 and 2. Poplar and spruce abound in every part, suitable for fuel, fencing and building. Some fine creeks of fresh water were found, and there is a thick undergrowth of willow, especially along the the creeks. There are many suitable and good locations for farming and settlement.—*T. Fawcett*, 1883.

21. Outlines.—West, rolling to the north, and somewhat hilly to the south. Scrub in every section. Line crosses creeks in Sections 6, 19 and 18; marshes in 19 and 31; and the Morleyville and Calgary trail in Section 30.—*M. Aldous*, 1881.

East, heavily-rolling in places, and the soil mostly class 2. There are willows and scrub along the line, and the Elbow River was crossed, flowing east. On the north bank is the Morleyville trail.—*L. Kennedy*, 1881.

Sub-division.—The surface of this township is generally rolling, except in the south-west corner, where it is hilly. About one-third of it is covered with a growth of timber, consisting of poplar, averaging 7 inches in diameter and 30 to 60 feet high, with a few spruce. Most of the wood is along both banks of the Elbow River, which traverses the south-eastern part, also in the hilly portion of the south-west, on some of the central sections and along a portion of the east bank of Jumping Pound Creek, which enters from the west on Section 18, and flows due north through the middle of the western tier of sections. A great quantity of willow, averaging about 1½ inches in diameter, covers the remaining two-thirds of the township. The width of the Elbow River is from 70 to 250 yards, and of Jumping Pound Creek, from 50 to 70 yards. The soil consists of black loam, 10 inches deep, on a clay and sandy subsoil, and rates classes 1 and 2.—*C. E. LaRue*, 1883.

25. —Outlines.—Rolling country, becoming very broken as it approaches the coulées around Bow River, which are full of dense willow scrub. Bow River crosses the eastern boundary on Section 25, and the C.P.R. in the same section. The country on the north side of the river is much broken by the coulées running to

it. There are several fine springs in this township. The soil is of first class character, and the grass of luxuriant growth. The township cannot be surpassed for grazing.—*T. R. Hewson*, 1883.

Sub-division.—This township is mainly rolling prairie, but in places there is a considerable growth of willow brush. The Bow River flows through the north-eastern part, in a wide, deep valley. Its banks are dotted with a few poplars or a fringe of spruce. Jumping Pound Creek, a stream about 100 feet wide, 2 feet deep, with rapid current, stony bottom and pure water, traverses the north-western part also in a deep, wide valley, and in places has steep, rocky banks. A wide valley also extends through the western part of the township. The soil, except in the north, where in places it is stony and gravelly, is a rich black loam, on a clay subsoil. The surface is slightly broken by marshes of fresh water. The township is well adapted either for grazing or agriculture.—*G. Ross*, 1884.

- 26.** *Outlines.*—West and east, very hilly. Is traversed by Big Hill Creek, which is a fine, clear stream, 20 links in width, and very springy along the banks, which are lined with occasional clumps of spruce. It flows south-west to Bow River. The soil is of first class character, and the growth of grass, luxuriant. Cannot be surpassed for grazing land.—*T. R. Hewson*, 1883.

Sub-division.—Principally rolling prairie. Bow River flows through the south-western part in a wide valley. Its banks are generally skirted by a few poplars or spruce. A valley, about a mile wide and 200 feet deep, in which flows a creek about 6 feet wide and 9 inches deep, traverses the western part of the township in a southerly direction. The south-eastern part is much broken by the banks of the Bow River, with its gorges, and the coulée of Big Hill Creek, a stream about 10 feet wide and 10 inches deep. On the south bank of this coulée, in Sections 11 and 12, is a belt of poplar. Sections 27 and 28 are broken by a lake of slightly brackish water. The stock kept by the British American Rancho Co. resort to it for drinking to a large extent. This company have their buildings on Sections 3, 10 and 4. Cochrane Station, on the C.P.R., is situated on Section 3. The soil except in the valley of the Bow River, which is stony, is black loam on a clay subsoil. The growth of grass is good. There is good agricultural land in the township, but it is better adapted to grazing than to grain growing.—*G. Ross*, 1884.

- 27.** *Outlines.*—West, south third and north third are covered with a growth of small wood, and are rolling prairie. The central third is in the valley of Horse Creek, and has quite a number of small creeks.—*T. Fawcett*, 1883.

Rolling prairie, with high ridges, watered by spring creeks; contains some small bluffs of poplar and a few spruce, but mostly burnt over. The soil is a rich clay loam, and rates first and second class.—*C. F. Miles*, 1883.

Sub-division.—The greater portion is of a gently-rolling character. Sections 33, 34 and 35 are cut up by one large and two

small ravines, which extend easterly through them. Upon the south banks of these ravines, and also on a part of the east boundaries of Sections 27 and 35 are situated small bluffs of poplar bush, only fit for fuel and fencing. The following sections are open, rolling prairie, viz, 5, 6, 7, 8, 16, 17, 31 and 32, the remaining portions of the township being covered with a light growth of short willow scrub. There is but one stream of any note, which is known as Horse Creek, which flows southerly through Sections 19, 18, 7, 8 and 5, and has an average width of 10 feet and depth of 2 feet. The water is good, and contains trout. The soil is a black loam on clay subsoil. Class 1, and is well suited to general farming.—*J. J. Burrows*, 1884.

- 28. Outlines.**—North, the soil is of the best quality, grasses are luxuriant, and water plentiful. Several spring creeks, varying in size, from a small streamlet to a creek of 50 links wide, are crossed. The timber consists of poplar, balm of Gilead and willow. West, undulating prairie, thickly covered with willow scrub and scattered poplar and spruce, and some pine, good for fuel, fencing and building. Soil, a deep clay loam, class 2. Some fine creeks traverse the township, tributary to Dog Pound Creek.—*T. Fawcett*, 1883.

Rolling prairie, with high ridges, watered by spring creeks; contains some small bluffs of poplar and a few spruce, but mostly burnt over. The soil is a rich clay loam, and rates first and second class.—*C. F. Miles*, 1883.

Sub-division.—Very rolling surface, and well supplied with good fresh water, by many small springs and creeks, of which Dog Pound Creek is the largest. This creek enters from the west on Section 19, and makes a circuitous course about the north-west quarter of the township. Its current is about 5 to 6 miles an hour, and it is well stocked with spring trout. Along each bank, in the first three sections above named, is a narrow strip of spruce and poplar bush of large size. There are also bluffs of poplar bush, well suited for building and other domestic purposes, situated along the northern boundaries of Sections 7 and 8, and the eastern limits of 8, 18 and 30. The balance of the township is lightly covered with a growth of small willow scrub. The soil is of excellent quality, being composed of a deep black loam on a clay subsoil, and is well adapted for agriculture or grazing.—*J. J. Burrows*, 1884.

- 29. Outlines.**—West, surface undulating and covered more or less with scrub or timber. Soil, good. Class 2. Line crosses several creeks and marshes. Wood in Section 31 and the south of 19.—*T. Fawcett*, 1884.

East, rolling prairie, with willow brush. Soil, black loam, 6 to 10 inches deep, on a clay subsoil. Class 1. Dog Pound Creek crosses Section 13.—*L. R. Ord*, 1884.

- 30. Outlines.**—West, surface covered more or less with scrub or wood. The township is suitable for stock raising. A creek in the south half of Section 6, and in the north half, Little Red Deer River. A large marsh in 31 and smaller ones in 18 and 7.—*T. Fawcett*, 1884.

East, rolling; thick willow; black loam soil, 15 inches, on clay. Class 1. Three small creeks in Section 13 and two in 24.—*L. R. Ord*, 1884.

- 32.** *Outlines.*—North, good land, mostly wooded with poplar. Little Red Deer River was crossed four times in Section 36, and twice in 35; other streams cross in 32 and 33. Most of the line is scrubby.—*E. Bray*, 1883.
- 40.** *Outlines.*—North, in Section 36, the line crossed a stream which is about $1\frac{1}{2}$ chains wide, and from 2 to 5 feet deep. This stream is the chief tributary of Medicine River. The eastern portion is undulating. Low ridges are scattered over the western part, with a few muskegs among them. Willows, poplar, groves of spruce and tamarac, with quantities of fallen timber, are found. Soil, first and third class.—*C. A. Magrath*, 1882.
- 44.** *Outlines.*—North, heavily wooded country, mostly pine, with some spruce, poplar and birch in the eastern part. There is more or less muskeg on every section, except 36. Soil, a shallow sandy loam over clay. The land rates class 3, on Sections 35 and 36, but elsewhere it is generally class 4. In a deep coulée, on Section 33, is a creek flowing south.—*J. J. McArthur*, 1884.
- 48.** *Outlines.*—East and south-east, the country is timbered with heavy spruce and tamarac, mixed with some balsam and poplar, but in the south-western part a large proportion of the land is muskeg. The north-west of the township has an inclination to the Saskatchewan River. Section 1 consists of high land, wooded with small pine in the centre, flanked on both sides by muskegs. Several creeks, at intervals of from one to one and a-half miles, all flow north, except one on Section 5, which flows south from a small lake immediately north of the line. The soil is generally a sandy loam, 6 inches deep, on a clay subsoil. Classes 2, 3, and 4.—*J. J. McArthur*, 1884.
- 50.** *Sub-division.*—Is nearly equally divided by the North Saskatchewan River, which enters from the west, in the north-west quarter of Section 18, runs a little north of west and passes out in the north-east quarter of Section 25. Heavy woods, composed of spruce, cottonwood, poplar and tamarac, cover the township. General character is rolling, fairly watered by small creeks; very few lakes occur. Soil is heavy clay. A large creek, the outlet of Shoal Lake, enters the river from the north, after passing through the south-west quarter of Section 21. This creek may be used for driving logs. In the south bank of the river, Section 15, a large coal seam is exposed for about 5 chains. Its thickness cannot easily be ascertained as the bottom is under water, and the top 15 feet above low water mark. Seams were found in Sections 23 and 35, the latter being worked for household purposes. North of the river, seams that have been set on fire by lightning or bush fires are seen in many places.—*S. B. Lucas*, 1884-85.
- 52.** *Outlines.*—North, submerged by White Whale Lake, except about 10 chains in the extreme east of Section 36, which is scrubby.—*T. Kains*, 1882-83.

West, rolling country. Two creeks in 18. Muskegs in 6 and 31. White Whale Lake submerges the greater part of Section 31. Bush all along the line. Soil, sandy loam over clay. Class 3. East, heavy spruce. Line crosses a trail in Section 7, and the White Whale River in 36. This river drains White Whale Lake, which submerges the greater part of the north of the township. Soil, sandy loam over clay. Class 3.—*J. J. McArthur, 1883.*

TOWNSHIPS WEST OF FIFTH INITIAL MERIDIAN.

RANGE V.

- 23** *Outlines.*—Very hilly country, thinly wooded with small poplar, pine and spruce, and dense scrub. One or more small creeks, all flowing east, were crossed on every western section, except 6. In 31 there are a couple of wet meadows. The soil is poor, and the land generally rates class 3, in the north, and 4, in the south. The eastern side of the township is bounded by the Sarcee Indian Reserve, which occupies three townships due east.—*T. Fawcett*, 1884.
- 24** *Outlines.*—Surveyed the north and east boundaries. The north is somewhat hilly, with some spring creeks. The soil is a very good black loam, and class 1. The vegetation in the valleys is luxuriant. There are scattered trees of poplar and pine of small dimensions. Jumping Pound Creek crosses the southern half of the township, and the eastern line in Section 13; its course is then northward, close to the west side of the eastern boundary.—*M. Aldous*, 1880.
- West, chiefly broken and hilly prairie. Alluvial soil, black loam; depth, 6 to 18 inches; subsoil, clay. The land rates class 1, except on Sections 6 and 31, where it is class 2. The former section consists largely of marshy meadows. Water is plentiful, every mile of the line being crossed by one or more streams, all flowing east, among which is Jumping Pound Creek, 26 feet wide 18 inches deep, current 6 miles an hour, on the southern half of Section 7. In its valley is some green spruce and dead timber. For about half a mile north of the creek the surface is gently-undulating prairie, with some scattered poplar and pine. On Sections 19, 30 and 31 are hills, wooded with poplar and spruce.—*T. Fawcett*, 1884.
- 25.** *Outlines.*—West, principally open, hilly and broken prairie. The southern half of Section 6 is wooded with poplar bush, including some large poplar and cottonwood, with some scrub. The north half of 6 is watered by two or three deep sloughs, and Section 7 by a creek, flowing north; but on the northern sections water is scarce. Soil, generally clay loam, 8 to 18 inches in depth, on a clay subsoil. The land rates as follows: Sections 6 and 18, class 1; 7, classes 1 to 2, and the rest, classes 2 to 3.—*T. Fawcett*, 1884.
- East, rolling country, with a soil of black loam over sandy loam. Jumping Pound Creek enters the southern half of Section 12 from the east, and flows due north till it passes out at the north-east corner of 24, shortly before which it is joined by a tributary from the west. There is a small quantity of wood in Sections 1, 24 and 36.—*T. R. Hewson*, 1883.
- 26.** *Outlines.*—West, hilly prairie, stony in places. The C.P.R. crosses the line near the northern limit of Section 7. The Bow River

flows eastward through the north half of 18, and the trail to Calgary passes near its north bank. A tributary of the Bow River enters Section 30 on the southern half, and flows south-easterly through 19. The soil is generally a clay loam, 8 to 14 inches deep, on a clay subsoil. Classes 1 to 3.—*T. Fawcett*, 1884.

East, high rolling prairie. For the first 2 miles, going north, there is a gradual descent toward the Bow River, which flows eastward across the southern half of Section 13. The C.P.R. passes through the valley of this stream along the south bank. There are several fine streams running into the river, which abound in mountain trout. North of the river the land falls gradually, and toward the north the surface becomes somewhat broken. A deep ravine on 36, containing a small creek. The soil is black loam, and the subsoil sandy loam. Can scarcely be surpassed for grazing.—*T. R. Hewson*, 1883.

29. Outlines.—West, Sections 6 and 7 are broken by the right bank of the Little Red Deer River, flowing north-easterly, first west, and afterwards east of the line, which it crosses several times on Sections 18 and 19. The width of this stream is 22 yards; depth, 2 feet; current, 6 miles an hour; banks, high, steep and rocky. The country is wooded with poplar and pine. In Section 30 is a large meadow. The land rates class 3. South, the country along this line is wooded with pine, poplar and scrub. Soil, clay loam over clay, class 1, in the east, and gravel, class 3, in the west. East, the country is all rolling, except in the south-east, where it is level, and in Section 36, which is heavily rolling and descending to the valley of the Little Red Deer River, where there are dense poplar woods, extending some distance east of the line. The soil throughout is a black loam, class 1, and except in Sections 1 and 12, where it overlays some beds of gravel and sand, it rests entirely on a clay subsoil. In Sections 13 and 24 there are some large hay meadows, and throughout there is some scattered poplar.—*T. Fawcett*, 1884.

30. Outlines.—West, hilly surface, covered with dense scrub and timber. Sloughs, hay marshes and small creeks occur all along the line, except on Section 6. In the south half of Section 31 is a stream, flowing east, which is about 20 feet wide, 8 to 20 inches deep, and has a current of 7 miles an hour. The land rates class 3. East, the whole line is rolling and undulating, except in Section 1, which is in the valley of the Little Red Deer River. This stream is about 60 feet wide, 1 to 2 feet deep, and has a 5-mile current. In the valley there are some spruce and pine trees, but elsewhere on the line there are only scattered poplars among a dense growth of scrub. The soil is all a clay loam and class 1, except in 36, where, in and about the marshes, it is a vegetable mould, growing willows, and class 2.—*T. Fawcett*, 1884.

40. Outlines.—North, rolling country, covered with poplar, spruce, pine, willows and some brulé, with fallen timber. A small lake lies south of the line, on the eastern half of Section 32. On Section 34 the line is crossed several times by a small creek.—*C. A. Magrath*, 1883.

- 44.** *Outlines.*—North, excepting Section 36 and the greater part of 35, which lies in a tamarac muskeg, the country along this line is heavily wooded with pine, spruce, poplar and birch. In Section 35 a creek, flowing north-east, was crossed several times. Smaller muskegs occur at intervals all along the line. The land rates class 4.—*J. J. McArthur*, 1884.

TOWNSHIPS WEST OF FIFTH INITIAL MERIDIAN.

RANGE VI.

- 23. Outlines.**—West, in the Rocky Mountains and inaccessible in the south. High, rocky hills; timber on slopes. In Sections 19, 30 and 31 the line crosses creeks. The soil is very inferior, and the land rates class 4. In the east the township is very hilly. Soil, inferior. Timber, small and mostly dry. Dense scrub. Line crosses three creeks in Section 12; one in 13; one in 24; three in 25 and two in 31.—*T. Fawcett, 1884.*
- 24. Outlines.**—North, Section 31 is a meadow valley, wooded on the hill sides by pine and poplar, and watered by two small tributaries of a creek, which flows along the north side. From thence the country is more or less wooded with poplar, spruce and willow, from 1 to 6 inches in diameter, and several marshes and lakes were crossed, the water in every case being good. The soil is generally clay loam over clay, but in some places it is sandy and gravelly. The land rates class 2 on Sections 31 and 36, and class 3 on the rest. The west is in the foot hills of the Rocky Mountains; very rough, and mostly timbered; creeks in Sections 7, 18 and 31, and brûlé in nearly every section. The soil is of inferior quality, and the land rates generally class 3. The east is prairie, timbered throughout. Soil, varying from first to third class. Several creeks and a number of marshes. Jumping Pound Creek crosses Section 12.—*T. Fawcett, 1884.*
- 25. Outlines.**—West, surface very hilly, and mostly covered with timber. Line crosses two creeks in Section 6, one in 19, and the Bow River in 31, also several trails at different points. The soil is, as a rule, gravelly, and rates class 3. East, mostly open prairie, varying from first to third class land. Line crosses a creek six times in Section 12, and in 13 the trail to Calgary. Bush in the south half of Section 1, and scrub in 13. Several ponds and marshes. More than half of this township is in the Stony Indian Reserve.—*T. Fawcett, 1884.*
- 26. Outlines.**—West, surface hilly and soil gravelly. More or less timber in places. Creeks cross the line in Sections 6, 18, and 30. East, hilly prairie, stony in places. A creek, about 8 feet wide, 1 to 2 feet deep, current, 6 miles an hour, flows southward through Section 36 and the greater part of 25. Part of 36 is covered with low scrub, and is in places wet and marshy. The line crosses Bow River on 13, near its junction with Ghost River. The Calgary trail passes near its north bank. The C.P.R. crosses the south-east corner of the township. Soil, generally a clay loam, 8 to 14 inches deep, on a clay subsoil. Classes 1 to 3.—*T. Fawcett, 1884.*

- 28. Outlines.**—North, broken and hilly country, more or less wooded with pine and poplar, from 1 to 10 inches in diameter. The Little Red Deer River, with a tributary, flows north-easterly through Sections 34 and 35, and crosses to the north on 36. Clumps of balm of Gilead along its banks. Several small creeks were crossed on the three western sections. The soil is sandy loam, or sand and gravel, on a clay subsoil. The land rates as follows, viz., the western half of Section 32, class 1; 31, 35, 36 and the balance of 32, class 2, and the rest class 3.—*T. Fawcett*, 1883.
- 40. Outlines.**—North, is a bushy country, with a poor sandy soil,—very little of it being above class 4. The wood generally consists of poplar and spruce, and some tamarac and willow about the swamps and low flats. There is some spruce large enough for lumber, growing among the smaller timber.—*C. A. Magrath*, 1883.
- 44. Outlines.**—North, Section 36 and part of 35, is thickly wooded with pine bush. In the former section three small streams are crossed. The western half of Section 31 is heavily timbered with spruce, pine and poplar up to 3 feet in diameter. The remainder of the country along this line is principally muskeg. The land rates class 4.—*J. J. McArthur*, 1884.

TOWNSHIPS WEST OF FIFTH INITIAL MERIDIAN.

RANGE VII.

- 24.** *Outlines.*—North, hilly country, wooded with small pine, poplar, a few spruce and some willows. Small creeks on Sections 36 and 34, and several more on 33, all flowing north. A lake over half a mile in width extends westward into 32, for a considerable distance. The soil is generally sand and gravel over clay, and the land rates class 3. West and east, this township is in the foot hills of the Rocky Mountains, very rough and mostly timbered. Creeks cross these lines in many of the sections. The soil is inferior, and the land rates class 4 on the west, and class 3 on the east. The Stony Indian Reserve lies partly on the north-west quarter.—*T. Fawcett, 1884.*
- 25.** *Outlines.*—Almost entirely occupied by the Stony Indian Reserve. The C.P.R. and the Bow River cross this township.
- 26.** *Outlines.*—The west is in the foot hills of the Rocky Mountains, mostly covered with timber. Good pasture land to the east, in valley of Ghost River. Creeks were crossed in many of the sections. Brulé in every section. The land rates classes 3 and 4. In the east the soil is more or less gravelly.—*T. Fawcett, 1884.*
- 28.** *Outlines.*—North, very broken and hilly country, wooded chiefly with pine along with some poplar, spruce and willows. Towards the west the timber is from 3 to 15 inches in diameter, but in the east it is smaller, and from 1 to 8 inches. Numerous small creeks all flowing south, were crossed all along the line. The Little Red Deer flows south-easterly through Section 31, crossing the line several times in the western part. The alluvial soil is sand and gravel, and the subsoil clay, class 3.—*T. Fawcett, 1883.*
- 40.** *Outlines.*—North, a large proportion of the country along this line is covered with spruce, brulé and fallen timber, overgrown with small poplar and willows. On the western half of 36 is a large spruce and tamarac swamp. Some large spruce, cottonwood, and poplar occur on 34 and 35. 32 is broken by the Saskatchewan River, flowing north, which, including an island, 286 yards wide, is 530 yards in width. The soil is generally clay, and the land rates class 4.—*C. A. Magrath, 1883.*
- 41.** *Outlines.*—North, the country along this line contains heavy spruce, pine and poplar, with occasional brulé and muskeg. The land is rated classes 3 and 4.—*J. J. McArthur, 1884.*

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MAP OF TOWNSHIPS 21 TO 36 WEST OF THE FOURTH AND FIFTH INITIAL MERIDIANS.



MAP OF TOWNSHIPS 37 TO 52 WEST OF THE FOURTH AND FIFTH INITIAL MERIDIANS

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MAP OF TOWNSHIPS 53 TO 68 BETWEEN THE FOURTH AND FIFTH INITIAL MERIDIANS





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